

Aviation News

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India-China Wing of ATC Cited: Brig. Gen. Thomas O. Hardin, commanding general of the Eastern Sector of the India-China Wing of the Air Transport Command, receives from AAF's chief, Gen. H. H. Arnold, a Presidential citation for the outstanding war work of his command. Gen. Hardin is well known in U. S. aviation where he was formerly an official of TWA. He was chairman of the old Air Safety Board of the Civil Aeronautics Authority.

Nearly 1,000 Lightplanes Offered for Sale

Bids already called on 765 smaller craft, with additional ships expected to be put on the block; OPA studying fuel policies.....Page 14

ATA Opens Study to Determine Rate Bases

Dr. Lewis C. Sorrell, head of Economic Research and Planning Division, conducts investigation of airline earnings, capitalization, etc.....Page 42

ATC Gets 'Commandos' to Speed China Drive on Japs

Recognition by Roosevelt and Stilwell of India-China Wing's heroic work reveals vast and growing magnitude of military transport organization. Page 7

Naval Task Force Moves Speeded Up by Plane Carriers

American victories at Kwajalein, Coral Sea and Midway traced in great part to overwhelming carrier-based air strength.....Page 17

Six-Engined Planes Foreseen in Few Years

Difficulties characteristic of early giant craft believed generally overcome through streamlining and power plant improvement.....Page 9

Airline Officials Report to SEC on Stockholdings

Total of 1,500 shares of Braniff Airways \$2.50 common sold and 1,084 given away by three executives during December.....Page 44



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Washington Observer

WILSON FOR VICE-PRESIDENT?—Regarding reports of the development of sentiment within the Administration for Charles E. Wilson, WPA executive vice-president, as a running mate for President Roosevelt have been current in Washington for some time, but most political observers in the capital see little chance of such a combination. The argument for Wilson, of course, is that he would provide Administration assurance of an understanding of business men and their problems.

OTHER CANDIDATES—In connection with Wilson or other vice-presidential possibilities, it should be recalled that one of the issues used to put down a threatened revolt in the Democratic party four years ago was to indicate to several party prominent that they had been selected for the second place on the ticket. Then Henry Wallace's name was put forward and those who remember the Chicago convention know that Wallace was not the party choice at that time and that several other stalwarts with considerable delegate backing retired, bowing to the wishes of the Chief Executive.

TOWERS' PROMOTION—The expected appointment of Vice Admiral John H. Towers, former chief of the Navy's Bureau of Aeronautics, now commander of Air Forces of the Pacific Fleet, as Deputy Commander in Chief of the Pacific Fleet, comes as good news to the aviation world. A pioneer flyer and highly regarded by

air men everywhere, his promotion is considered a definite advancement for naval aviation and points up the importance of aviation in current Pacific operations and those to come. When Admiral Towers left the Bureau of Aeronautics to become Commander of Air Forces of the Pacific Fleet, there were those who believed the aircraft was being pushed aside, since the assignment was largely administrative. His new post will give him wider scope for his talents and is interpreted here as deserved recognition of his ability.

ALUMINUM SHEET TIGHT—WPA has warned aluminum sheet producers that production must be stepped up immediately if 1944 requirements of the aircraft program are to be met, and blasted false rumors that there is an over-supply of aluminum sheet. There is no surplus in sheet, a viewpoint that has arisen because of a reduction in aluminum pig production. Of aluminum pig there is plenty at the moment but the production of sheet has not kept pace. In some sheet mills, workers have left their jobs for other plants on the false assumption that there is an abundance of sheet. Nothing could be further from the truth.

FLYING HEROES—The incredible skill and daring of American flying men are recorded in a new book, "American Heroes of the War in the Air," edited by Howard Mingo, a cooperative volume which sets forth as detail the

Diaphragm engineer is V-formerian over Naval Air Station at Moffett Field, Calif.





BALLOON "TAKEOFF" FROM A CARRIER

The fact that free balloons take off frequently from Navy carriers during target practice is not generally known, but this new official photo shows one being prepared for ascent. A Cotton Bladder is being raised by hoistlers in the background.

47½ converted DC-3's—that flew the South Atlantic with flight overloads of five tons each on a 1,978-mile hop from Natal to Africa. The ships grossed 33,868 pounds, against the Civil Aeronautics Administration standard of 33,393.

It was early in the war, and pilots found when they opened their sealed orders after takeoff that they were to fly to an Indian base to open the Burma air route into China. Captains in that first group say their planes always carried about 39,000 pounds gross load on the Burma run.

Medal for Mitchell

A resolution authorizing the President to award posthumously a Congressional Medal of Honor to Col. William (Billy) Mitchell, pioneer military aviator, has been approved unanimously by the Senate. The resolution was offered by Sen. Styles Bridges (R-N.H.) and directed that the medal be presented to Mrs. Martin Fidoles, of Milwaukee, sister of the early exponent of airpower.

4,500 "Liberators" Ordered at \$137,000

Contract price compares with \$238,000 paid two years ago, General Browning reveals.

Disclosure that the Army Air Forces have signed a contract for 4,500 B-24 Liberators at \$137,000 each has been made by Brig. Gen. Albert J. Browning, director, Purchase Division.

Emphasizing savings by the War Department through their policy of planning and advance price field representatives, he compared that price with \$238,899 each for 1,200 of these B-24 Liberator bombers contracted for with the same firm about two years ago. This one contract, he said, represented a saving of more than \$468,000,000.

Industry Aids in Saving.—At his press conference, the general did not mention the reduction in man-hours necessary for production of such bombers nor did he mention labor utilization, but it is obvious that the industry has contributed to this saving.

In addition to being director of

the Purchase Division, General Browning is special assistant to the Undersecretary of War for purchasing for the Army Air Forces.

Cuts \$173,000,000 Savings.—In the purchase of the B-24's, General Browning said that, had the cost two years ago prevailed, the total for the 4,500 planes would have been \$471,590,593 more than today. And included in this present \$137,000 price are improvements valued at several thousand dollars per airplane.

He revealed that item prices at which the War Department is contracting to buy component and supplies, on the average, have declined 20 percent from the levels of two years ago. Estimated dollar savings for the past two years resulting directly from contracts set at prices below the January, 1942, levels were over nine billion dollars, with an anticipated saving of \$4,740,804,989 during the first six months of 1944.

Production Costs Reduced.—The credit for these tremendous savings was given recently by General Browning to American industry. He said industry had not only reduced costs through greater production efficiency, but they had cooperated in voluntary refunds where contracts were out of line.

Price and cost are going to have more and more bearing on the placing of contracts and the cancellation of contracts. Browning said he had found that the smaller the differential between cost and price, the more efficient the production.

Subcontracting.—A study made in 1943 showed that 51 percent of every dollar received by the War Department's largest prime contractors is spent by them with subcontractors and suppliers. "This makes the purchasing agents of business almost as big buyers as the Government. We want them in 1944 to carry out a close pricing program through all the users of subcontracting. We are laying out plans to help them."

Price Studies.—Prime contractors of the Army Air Forces are already being checked and assisted in their subcontracting so that branches of the Army have price inspectors who go into the prime contract plants and study the prices paid subcontractors, General Browning said.

In conclusion, the general said the record of his division in bringing price and cost into line would no longer be startling, as cost was now fairly close to efficiency.

Development of Six-Engine Planes In Next Few Years Foreseen

Difficulties characteristic of giant craft believed generally overcome through aerodynamic streamlining and progress in engine efficiency.

By ALEXANDER MCGRILLY

While present accomplishments with jet propulsion power have freed public imagination, many possibilities remain for development of faster, larger, better-designed aircraft, using improved developments of the conventional internal-combustion gasoline engine and American designers are exploring them thoroughly.

With most companies looking toward larger planes, the designer has three means of supplying the additional power needed to lift and propel them through the air: He can use larger powerplants, or more of them, or both.

Six-Engine Planes Likely.—It is a conservative prediction that within the next few years, the "small" four-engine bombers and transports of today will be followed by larger planes powered by six engines, or possibly eight or more.

Several large planes, using more than four engines, have been con-

structed in the past, most of them giving fairly good performance, but knowledge of aerodynamic streamlining and of engine cooling has progressed so rapidly in recent years that multi-engine craft of the future can be expected to be the more efficient than anything produced previously.

Zeppeles Bomber.—We had brief record of a five-engine Zeppeles bomber (not to be confused with the strapons) built in Germany during the World War, with 138-foot span and carrying a 4½-ton useful load, which may have been the first plane with more than four engines.

Wright Field, Dayton, still has complete data on this country's first venture into the seven-plane building field, the six-engineed Haring bomber, powered with four Liberty tractor motors and two pushers, a triplane measuring 120 feet from wing-tip to wing-tip.

12-Engine Craft Built.—Later

Dornier brought out the DO-X flying boat, which mounted twelve engines and crossed the Atlantic, but never earned sufficient payload to be commercially practical.

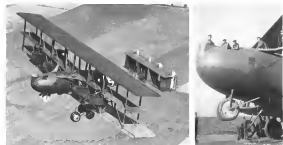
Still later came the French Latécoere airplane, the *Léviathan de l'Atlantique* of Paris, with 18½-foot span and six 1,500 hp engines. This plane also crossed the Atlantic but most American designers considered it a makeshift from many points of aerodynamic efficiency.

On blueprints, France reportedly had a twelve engine 268,000-pound airliner ready for a test model. It had twelve engines in groups of two built into the wings.

Flexible Power Plant.—Since large aircraft engines are in many instances two smaller engines put together, it is apparent that the big planes of the future can have a wider flexible range of powerplant design.

One builder of liquid-cooled engines is known to have been working since 1933 on a large engine which is a combination of two of its smaller engines, making a 26-cylinder engine by assembling two V-12 engines into one unit.

Research.—It would give the designer considerable leeway, to choose whether he would use six of the big engines, or twice of the small ones. And with dual rotation propellers, the designer could use two of the smaller engines attached



Forerunner of U. S. 6-Engine Bombers. The Haring Bomber, shown in flight near Dayton in 1922, was one of the earliest six-engine aircraft. Propagator of today's conventional aircraft engine hold that giant

craft with six or eight engines are likely to be produced in the next few years or so. Other plans, first by William C. Kirtz and taken at Cheekboard Field, Maywood, Ill., in 1920, show nose of Haring Bomber



ITALIAN JET PROPULSION PLANE:

A look at Gas Turbines and Jet Propulsion for Aircraft, published originally in *Science* by Flight Publishing Co., Ltd., has been published in the United States by McGraw-Hill, Inc., of which Glenn D. Aker is editor. Among the photographs included in this text one of the German jet-propelled plane, early Italian flying model, showing apparently normal rudder and elevator structure and the propulsive nozzle.

to shafts operating the same propeller.

There is speculation on the extent to which the air-cooled engine will continue to have predominance in the big plane field after the war. It may be that the liquid-cooled engines, because of versatility of placement, will move into this field. The only logical place for an air-cooled engine is in the air stream, while a liquid-cooled engine can be installed almost anywhere in the airplane selected by the designer and still be properly cooled if its radiators are adequate.

Fighter Plane Designs—Designs of two fighter planes, the Bell Airacobra and the Bell-Hamilton Mustang, have shown the possibilities of remote placement of radiators, and the extension shaft

used on the Airacobra is another idea which probably will stand more post-war development. Whether air-cooled engines could attain the same flexibility of placement through some kind of air arrangement is another possibility for study. Aircooled engines powering helicopters are cooling fans, and while these divert some power, there still remains enough for satisfactory operation of the aircraft.

Aircooled Engines—When designers reach the point where their engine can be taken out of the airstream, a logical development is long awaited would be a neutral engine room, where all powerplants would be accessible to mechanics in flight, without necessitating a crawl out through a wing

catalwalk such as is required now in the few planes large enough for engine accessibility in flight.

Such an engine room arrangement would require some means of transmitting power developed out to propellers in leading and trailing edges, presumably some development of the Airacobra's extension shaft.

Plastic Tooling Society Formed

Organized by representatives of five major aircraft firms.

One of the most publicized aids in volume production of warplanes—plastic tooling—recognized as one of the most important of the war-developments adaptable to post-war industrial planning was given added impetus by the formation of the National Society of Plastic Tooling, by representatives of five major aircraft firms in eastern United States.

The new organization, holding its charter membership open for invited West Coast and other industrial area participation, held its organizational meeting in New York and elected as president Delmar Anderson, superintendent of production planning and tool design for the Buffalo plants of Curtiss-Wright Corp.

Other aircraft manufacturing companies participating were Bell Consolidated, Valtec, Grumman and Glenn E. Martin Co.

Officers—James W. Wagoner, vice-president was Thomas A. Herbert, superintendent of the plastic, plaster and foundry departments of the Allentown plant of Consolidated Valtec, who has been credited with getting the plastic tooling process for his company to a point where it has been assured a permanent place.

Harry W. Tomkins, of Curtiss-Wright, was elected secretary and Charles H. Miller, of Bell, treasurer.

Anderson said that, although plastic tooling was heavily developed by warplane plants, brought about by critical tool steel shortages, the cost saving factors and its adaptability should make it a boon to any manufacturers outside the aircraft industry.

Objective—"It is the aim of this society," he said, "to bring together for the first time those practical men who are responsible for the development of plastic tooling as a recognized production process."

New U. S. Agencies to Be Formed To Handle Reconversion Program

Plans proposed in Congress and bureaus vary widely in policies and scope but all provide for establishment of separate organization to take over post-war task.

Regardless of what shape the final pattern for reconversion takes, one thing is certain: there will be new government agencies created to control the work.

Reconversion plans vary widely in the war agencies and in Congress, but all provide for new agencies. Those who are now charting industry's recovery will go together with their suggestions are.

Senator James H. Murray, who has proposed establishment of an office of contract termination administration, headed by a director appointed by the President, whose salary would be \$12,000 a year.

Senator Walter F. George, who has proposed creation of an office of declassification, headed by a director who is appointed by the President.

Bernard M. Baruch, who has proposed an office of economic adjustment, headed by a director.

In each of these three suggestions, however, there is a degree of uniformity, since each proposal specified that the agency created is "bifunctional" rather than "operational" and that the actual carrying out of plans be handled by agencies already established. This would leave the door open for the selection of the War Production Board as the agency to do the work, as many have thought all along would be the final determination.

Personnel—However, this brings up the question of personnel, which has never been mentioned in the subject, since WPA Chairman Donald M. Nelson has not returned from his statement of last fall that he would not head an agency whose sole function was to carry out orders passed down from an agency at a higher level. Specifically, he is known to have been unwilling to leave a WPA whose job was to carry out a volume of operations while Bauch headed down policies from Lathropville Park.

Despite these complexities, the reconversion pattern took shape more clearly last week as most of the developments were substantiated

enough to be significant. In the first place, Sen. Murray announced that hearings would begin in the Senate this week on his contract termination bill, thus paving the way for the first concrete action on any reconversion legislation. This bill deals exclusively with the issue of termination, and in its outline of plan, surplus properties, together with a number of other contract termination matters, together with an advisory board consisting of the heads of WPA, the Foreign Economic Administration, the War and Navy Departments, the Maritime Commission and the Reconstruction Finance Corp.

Post Payment Provided—The Murray bill also provides for the payment of an advance contribution of 90 percent of their share, and limits the function of the general accounting office to a determination of whether payment was made in accordance with terms of the

settlement and to the direction of funds.

In announcing the opening of hearings on his bill, Sen. Murray asserted that he is now preparing a list of witnesses to be called, and implied that they would represent both the government and industry.

George Prepares Measure—Meanwhile, action was crowded momentarily from Sen. George, who is preparing to introduce a measure based on a report issued by the Senate Special Committee on Post-War Economic Policy and Planning. This bill, when introduced, will form the broad framework of the reconversion program, since it embraces all the main transition problems, including disposition of plants, surplus properties, machine tools, as well as the problem of interim financing.

On the House side, the Colmer Committee made ready to slip into step with the Senate. An appropriation bill, which was originally granted to finance the operations of the Colmer Committee, and the task of setting up a staff was undertaken. Chairman Colmer announced that he would name a committee to consider matters and that various agencies would be called on for assistance. He had formerly reported his intention to Baruch to serve as an official adviser.

Keeneland Policy—The exact position to be occupied by Baruch's proposed office of economic adjustment was not completely clear in most persons who have followed the termination-reconversion-during the period. Baruch has already implied that it is planned as an over-all agency to develop policy on economic problems. It is expected to arise during the transition period. Baruch has already implied that it is planned as a small agency and one whose function would be purely directorial. It also is understood that he has advised the staff of WPA, E. Clayton, Texas oilman and present Assistant Secretary of Commerce, as the logical person to head the unit.

Study of post-war financial problems is not among the duties of a new agency, however, as the RFC indicated that it already has considered the subject carefully and is ready to make or guarantee investments to speed industrial demobilization.

Reconversion Statement—Charles H. Henderson, chairman of the Board of RFC, revealed that he had told the 31 lease agencies affil-



AVIATION WRITER DIES:

Steen (Cub) Taylor, nationally known aviation editor of the New York Daily News and president last year of the American Writers Association, died Feb. 23 of a heart ailment in New York City. Taylor was a balloon officer in the late war and later became a pilot. He was commander of Air Service Post 381 of the American Legion, a member of the Quail Club and the Wings Club. He was 47.

lated with RFG is "be prepared to carry out our responsibility to the national economy in the exercise of our statutory lending powers for war demobilization, contract termination and conversion to peacetime operations."

Henderson also instructed the loan agencies to survey their territories in determine what assistance may be expected from RFG and how it could be most helpful.

Bell Group Back After Soviet Study

Report on Russia use of U.S. air equipment against Germans.

The first aircraft manufacturing group to be extended a full opportunity to study the use made by the Russians of American war equipment in general and airplanes in particular—that was sent abroad by Bell Aircraft—has returned to the United States.

Headed by Leighton Rogers, assistant to Lawrence D. Bell, president, Bell's four-man technical mission spent five months in Russia and was given complete access

to combat fighter bases and Soviet aircraft plants.

Arranged Through Stalin—In addition to Rogers, the mission included George Ray, engineer, and William Hawkins and Frank Zabocek, of the Bell Service Department. Arrangements for the mission were made through direct correspondence between Marshall Stalin and Bell, who adapted the direct talks after moves through ordinary intermediate channels had failed. Bell, anxious to have his own men see how the P-39 Airacobra and other aircraft are being used against the Germans had difficulty when he tried to arrange a mission through conventional means of correspondence with Stalin.

Results—When Bell wrote direct to Stalin early last year, permission to send the mission was granted at once. Details of the negotiations were known to Aviation News and others in aviation circles at the time, but since the Bell group was the first manufacturing mission to gain access to Russian air bases, it was regarded that details be withheld.

Results from the mission were

two-fold, according to the report made by Rogers. He said the Russians were eager to get from Bell personal accounts to specific problems regarding maintenance and servicing of the Airacobra and were glad to be given special tools which the technicians took with them to Russia.

Methods Studied—The Bell men, on the other hand, benefited greatly from its opportunity to study Soviet operational methods, and to learn how to provide the Red Air Force with equipment personnel exactly the characteristics which the Russians most desire in their combat theater.

Rogers said the Russians on all side paid generous tribute to the fighting characteristics of the Airacobra which they have ranked as one of their favorite combat aircraft. Rogers and his party had much praise for the courage and skill of Soviet airmen and he noted reports that Russian pilots are reckless, saying that "they are good pilots and know what they are doing."

Dorries Not Any Reckless—"The Russian pilots fly their planes to get a job done and they don't baby their equipment," Rogers said. "They are rather naive of fact but completely confident of their ability against the Germans. But they are not reckless."

The Bell group found that in Russia the entire population is committed to the policy of giving the best of everything to its fighters, even if this means civilians look clothes and food.

Results Studied—Results of the Bell mission were carefully watched by the aircraft industry generally, which has felt that perhaps the Russians were not giving out as much information on their war commitments with the equipment and technical knowledge we were giving to Russia.

Auto Plants Deliver \$5 Billion Planes

The extent to which the automotive industry is now in the aviation field is reflected in a report of the Automotive Council for War Production which says the automobile industry has delivered aircraft valued at more than \$100,000,000 to the government in 1943-45.

Council estimated output was equal to an invasion armada of 194 squadrons, each consisting of 15 heavy bombers and 35 medium



Reconstructed Jap Walrus. This plane, showing front and side views, is made up of parts from five Jap Zeros shot down in the battle for the Bismarck. It is undergoing a series of tests at Wright field.

bombers in addition to a protecting cover for each of 90 fighter planes. Aircraft production, the Council said, accounted for 48.2 percent of the industry's employment during 1943-45.

U.S. Rebuilds 'Hamp' From Five 'Zeros'

AAF men consider reports Jap plane is highly maneuverable and well armed but poorly armed.

Parts of five Jap Zeros, shot down in the battle for the Bismarck, have been used by the Material Command at Wright Field to reconstruct one of the planes, known as the Hamp, which Army technicians say is superior in many respects to its predecessor, the Zero.

The reconstructed plane already has been the source of considerable information for the Army Air Forces. Used widely in the Pacific theater both as a land-based and carrier-based plane, the Hamp's structure is all metal.

Light and Fragile—Compared with American planes it is light and fragile. The metal skin covering is extremely thin, a factor which makes some pilots uneasy when they fly the ship for the first time. They report that it fights the wing warping wrinkles.

High maneuverability is due in part to low wing loading. Breaks on the construction plane are and

Material Command specialists to determine its characteristics. Known as the Hamp, it is a fighter of fairly long range, which can be increased by the droppable fuel tank shown attached.



to be ineffective. It has a hook for heavy landing which probably is one of the reasons the landing does not function too efficiently.

Looks Not Leak Proof—Material Command technicians say that not too much consideration is given to the role of the Zero in its construction. One item noted was that there are no warning lights in the cockpit to advise him when to switch over to auxiliary tanks. The pilot simply allows his main tanks to run dry and then maps on the auxiliary. The gasoline tanks are not leak proof. The plane carries a belly tank, fuselage tank and two wing tanks, which together provide considerable range.

The cockpit is small and uncomfortable, although everything is within easy reach. It is an integral part of the wing, the two being all one structure, with the fuselage tail section and engine mounts joining as one.

Pilot Encouraged—The pilot has no armor protection but the plane packs two cannons mounted in each wing and two 7.7 caliber guns fir-

ing through the propeller.

The AAF reports that the Hamp is "a killer, a dangerous adversary in aerial combat, and a weapon in which no pilot has yet been reported to have made use of a single life in the cockpit which can be used to automatically operate a parachute in halts." The static line is there, but the canopy cover of the cockpit has no emergency release and must be manually operated to permit egress by the pilot.

The power plant is a Nakazuki Sabur radial 18-cylinder engine which appears to be a not-too-good copy of the Pratt and Whitney

WAL Agreement

Western Air Lines and its flight dispatchers, represented by the Air Line Dispatchers Association (ALD), have signed a working agreement after several months' negotiations. They submitted the agreement to the National Railway Labor Panel for approval.



P-40'S "BASED" ON CARRIER:

The Navy last week released this photo, taken early in 1943, when the Ranger formed land based P-40 Warhawks across the Atlantic. "From a despatched spot of the North African coast they were flown in from five bases by Army Air Force pilots," the Navy said.

Nearly 1,000 Lightplanes for Sale; OPA Studying Fuel Policies

Bids already called on 765 smaller craft, with additional ships expected to be put on the block.

By BLAINE STUBBLEFIELD

Nearly 1,000 government-owned light airplanes are going on the auction block as a result of liquidation of War Production Board inventory. Bids are being accepted for the sale of 765 aircraft and the setting of a used plane price ceiling by Office of Price Administration. Notification of the order also releases private planes for sale but there is no estimate as yet how many will be offered.

The planes are being sold because Civil Aeronautics Administration's War Training Service was curtailed about 38 percent as of Jan. 15. Further reduction next summer of civil training aids to Army, Navy, and eventual complete termination would throw more small planes on the market. At this writing bids had been called for 765 planes.

Fuel Plan—Primary question in the minds of prospective bidders on the WTS planes is gasoline. The OPA allows lead boards to ration enough fuel for all types of light-plane flying, including non-war-connected operations, to maintain existing pilot skills and to build up student hours in the air. Private planes, boats, farm machinery, etc., come under the same gas rationing system.

OPA is now looking into the use of gasoline by lightplane owners. There is no indication that the administrator's policy will be changed. It is probable, however, that OPA will obtain CAA data as full consumption of various types of planes. Reliable figures are required to keep students' and pilots' hands in, and reasonable build-up of hours on the planes' logbooks. OPA has some reports of airlines flying and even pay riding. Undoubtedly the example will be followed on both. Lightplane and pilot organizations are calling upon their members to cooperate in conserving gas.

Procedure—CAA and WTS officials advised potential purchasers as follows: You are being asked to bid on a lot of the planes for sale, posted by each regional office or district office of CAA's War Training Service. The posting will tell you the closing date for receiving bids.

Next, look at the airplanes. You can ask questions of the men who have had them in charge, and you can see the logbooks of any plane. For your bid with a certified check for 10 percent of the amount you bid. The regional office will open the bids on a designated date. Bids will be sent for approval to the Defense Plant Corp. The highest bidder will get the plane.

The original owner of any plane, when it was requisitioned by the government, can be sure of getting his plane back by bidding not less than the ceiling price allowed by OPA. All other bids at ceiling price or less will be rejected. The contract operator of the planes, too, is assured that it is presumed that they will make offers.

Should Inspect Planes—WTS airplanes are said to be in good shape,

because they have been maintained under the regulations and supervision of CAA. Bidders should bear in mind, however, that WTS had difficulty, until recently, in getting priority for maintenance parts, and also that the contractors never had the ownership motive to take best care of the equipment. The planes were purchased from private owners, under a requisition order, by the Defense Plant Corp., part of the Reconstruction Finance Corp., and were lent to WTS. DPC is now taking them back and selling them.

Additional DPC planes will be put up for sale from time to time, because the Army has been instructed to turn over some of its liaison planes to WTS, which will then dispose of less desirable DPC equipment by public sale. **Five Types**—The planes being sold are Stinson, Howard, Cessna, Taylorcraft, Aeronca, and Waco. There was no breakdown of numbers offered, by type. WTS regional offices maintained above and below New York, Atlanta, Fort Worth, Kansas City, Santa Monica, Seattle, and Chicago. In addition there are 50 district offices which will post the calls for bids.

CAA officials expressed confidence that all planes offered now and in future will be sold. Surveys show wide variation of opinions as to type, and it is believed most prospective owners will not wait for revolution to come. Despite the war, many student permits are still issued: 3,000 in November, 2,666 in December, and nearly 5,000 in January—a rate of about 24,000 a year. The pre-war rate was about 38,000. Of course most students never got licenses—in fact only about 15 percent.

Value Bids—Most of the privately owned planes in the United States will not be offered for sale because their relative value is increasing and because a great many of them are serving in the Civil Air Patrol. Members of CAP receive no pay, unless they are assigned to longer missions, but they do have the privilege of buying gasoline and flying under strict restrictions. There were about 33,000 private planes in 1943.

About 3,000 planes were purchased in all by DPC. Presumably all will be sold, soon or late. Most of them are two- to five-place types, with 75 to 100 hp engines, 65 hp and above is believed less than 50. Most of these now being sold are of the secondary type, because that is the class of training discontinued by WTS.

Instructor Course Stop—It was the Reduced Reserve Course instructor program that was dropped Jan. 16, cutting WTS total activities back 10 percent. Next termination will be the WTS Navy elementary 35-hour course for 18,000 students per year—probably in June. Aeronca has not yet reached a decision regarding the WTS bi-week crew training course, really a screening process, for 18,000 cadets per year, but it is believed in official circles to be merely a matter of time.

Community Fields To Get ACCA Data

Personal Aircraft Committee discusses post-war program

Plans for providing standing information on air field type leaders and their use as guides to communities working on post-war private flying substitutions were discussed at a meeting last week of the Personal Aircraft Committee of the Aeronautical Chamber of Commerce.

The committee work, as reported as to air shows of private flying acquainted equipment, proposals for which have come from several communities particularly interested in promoting private flying.

The committee declared progress was being made on plans for simplification of civil air regulations in view of flying characteristics of post-war private flying aircraft, although no details were announced.

Insurance—Reed Chambers, vice-president of U S Aviation Insurance Group, was a guest of the committee and discussed, off the record, private flying insurance problems.

William A. Mara, Stinson division, Consolidated Vultee, vice-chairman of the committee, was in charge of the meeting. The group decided to meet on the second Tuesday of each month and set the next session for April 11.

Other members present were Carl Friedlander, of Aeronca Aircraft, Edward Welsh, of Fairchild, Robert Rasmussen, of Piper Aircraft, James C. Hart, of Taylorcraft, and C. J. Brackner, of Waco Aircraft, also participated.

Geating is the chairman of the committee, but press of business prevented him from being there for the opening session of the conference and Mara presided.



shoulder, and the case itself may be used as a water container. The secret of its warmth, lightness, and ease is a flotation principle in its lining of shock absorbers. One side of the quilt is a shock absorber, the other is a brilliant armor, so that a seaborne airman can use it for sleeping.

Allied Blows Cut Nazi Fighter Output

Wilson cites continued U. S. production gains as bombers control enemy planes 40 percent.

Although the role of air power continues to be deplored in some quarters, best available information indicates that German ability to produce combat planes is declining steadily as a result of United States and British bombing of German aircraft production centers. Simultaneously, the ability of the American aircraft industry to produce faster and efficient combat aircraft types in greater numbers is gaining momentum.

War Department recently reported our own Army Air Forces have destroyed 46 percent of Germany's capacity to produce fighter planes and recent operations against Dusseldorf, Braunschweig, Fulda, Wiesbaden, Greiner, Frankfurt, Fockenheim, Hoesel, Leipzig, Oerlikon, and Leinfelden, as well as aircraft manufacturing facilities have reduced further Germany's aircraft production potential.

Weight Up 4 Percent—Charles E. Wilson, technical director and chairman, reiterated that, while our total military plane acceptance was substantially the same in numbers in January as in December, the weight of airplanes produced increased by 9.4 percent from 85,790,000 to 93,300,000 pounds.

"The American aircraft industry has the resources, the mechanical genius and the organization to maintain and even increase its superb production record," Wilson said.

Plane Every 18 Minutes—He pointed out that in November—a single aircraft factory, employing more workers than the entire industry had three years before, turned out 1,233 planes. That means one every 15 minutes of the working day. There has been a corresponding increase in the workers employed in aircraft production throughout the country during the same period.

New 'Quilt' Aids Airmen in Distress

Used as life preserver, sun, poncho, water container, etc.

A "quilt" that is a combination life preserver, tent, hammock, poncho and water container has been developed for airmen by the Materiel Command.

The "quilt" weighs only 3 1/2 pounds, opens in a six by four foot rectangle, and compresses into a bundle 14 by 12 inches. **Life Preserver**—Folded lengthwise and tied around the waist, it functions as a life preserver, keeping a man afloat indefinitely. The straps at the edge make it possible to convert it for use as a tent, hammock, and a shirt in the center makes it useful as a poncho.

It is packed in a waterproof carrying case which straps over the

WTS Hearings

A hearing will be held shortly, probably this week, by the House Subcommittee on Foreign Commerce Committee on the question of extending the Civilian Pilot Training Act of 1938, which expires June 30.

The assurance was given by the War Training Service last week by Rep. Lee, chairman of the committee.

Palmer of the Army and Navy to renew flight training contracts previously held by independent schools working under WTS has resulted in protest from areas all over the country.

The answer to that, 20 years later, was Pearl Harbor. During the 36's the Japanese publicized the information that it was concentrating on air-land-battle ships, but secretly built more carriers than it allowed the world to know. They had at least eleven at the start of the Pacific war, and several more in construction. During the battle of the Coral Sea (May, 1942) they lost the Shokaku, the Mikazuki and another, probably the Zuikaku. One month later, at Midway they lost the Kaga, Akagi, Soryu and Hiryu. As a result of these disastrous losses, they had no carriers in action when they tried to retake Guadalcanal, a fact which resulted in crippling blows to the remainder of the fleet. This does not mean that the Japanese imperial fleet, which was the bulwark of Japanese Imperialism, is still not a factor to be reckoned with. It is certainly not, but our admirals are looking forward to the all-out stunning match which must take place sometime, somewhere.

U. S. Naval Types Best—The 1942 record of the Navy's two crack fighters, the Corsair and Hellcat, is very reassuring on this point. In a little over 10 months of action, the Corsair destroyed 354 Jap planes in the air or on the ground against 332 losses, while the Hellcat in less than 6 months knocked out some 350 enemy planes while losing 62. These include the latest types, such as the improved engine-wing Zero (Horn), 16-20 engine powered Zero, as well as the still commonly encountered Zeke. The Central Pacific made it not the only theater of Tokyo, but it is one that will bear watching during the next few months.

NAVY/NAVY

Leathernecks Get New 'Helldivers'

Attack bomber version is new type supplied to Army and Navy.

A new attack-bomber version of the Navy's Curtiss SB2C Helldiver, dive-bomber, is now being delivered to the Marines by Curtiss-Wright Corp.

The same attack bomber, called the A-25 Helldiver, has been delivered to the Army Air Forces and the Royal Australian Air Force also has taken delivery of a number of these planes.

Special Design—G. W. Vaughan, Curtiss-Wright product, said the plane was designed by their en-

Towers Is Nimitz Aide

Vice Admiral John H. Towers, former chief of the Navy's Bureau of Aeronautics, has been named "deputy commander in chief, Pacific Ocean Area." The new position places Towers second in command to Admiral Chester W. Nimitz, commander in chief of the Pacific Fleet.

Towers' present post of commander of Pacific Fleet air forces, largely an administrative job, will be taken over by Rear Admiral Charles F. Powell, another veteran Navy aviator.

directly in response to the demand for a super dive-bomber that would carry a greater load faster and farther. The two-place, all-metal, low-midwing, monoplane carries its main bomb load wholly within its fuselage. It has provision for carrying additional bombs beneath its wings. It mounts four 2000 machine guns in its wings and has an additional gun in its rear cockpit turret.

Production of Helldivers currently is being conducted in the St. Louis and Columbus plants of the airplane division of Curtiss-Wright as well as by the Canadian Car & Foundry Co., Ltd., in Canada.

Background—At a recent session of the American and British Joint Aircraft Commission, the Helldiver was selected to be used on all models of this type, regardless of the airplane's military service branch.

The new attack-bomber version incorporates all the advances and combat lessons learned in current

conflict. The Helldiver is powered with a 14-cylinder Wright cyclone engine and is equipped with a three-bladed Curtiss electric constant speed propeller. The plane weighs in excess of seven and one-half tons.

Army Pays Tribute To Flying Jeeps

Artillery air observation post primes lightplanes as spotters.

The fleets of lightplanes used by the Army ground forces for artillery spotting on the Italian front received public and official recognition last week when the War Department Bureau of Public Relations released an announcement long-awaited.

Previous official publicity for the Grasshoppers had been restricted to sporadic photos of various personnel using them for brief inspection flights.

Hell Roars—Taylorcrafts, Aerovacs, Pipers and Stamco's, for example, have been highly prized by artillery officers in theaters in this country. Although purchases were made through Army Air Forces channels, pilots in most cases are artillery officers and men who have been trained to fly.

Without argument, and some with only 60 hp, the Hell Roars, as one captured German called them, fly sometimes only 200 feet above the ground, spotting enemy positions.

Officers of the artillery air observation post, who arrived in North Africa a year ago with the first overseas unit, and only one casualty has been reported, although Nam forces have shot or forced down several Grasshoppers.



Marines' New Attack-Scout—The new Curtiss A-25 Helldiver, attack-bomber version, is now being delivered to the Marine Corps by Curtiss-Wright. Equipped for day, glide and dive bombing as well as offensive gun strafing, it is an addition of the Navy's SB2C Helldiver.

Phillips

today as for a decade,
the name which stands
for research
to produce
new and better things
from Petroleum gases
as well as from Petroleum

Phillips AVIATION GASOLINE

PHILLIPS PETROLEUM COMPANY, BARTLESVILLE, OKLA. U.S.A.
major supplier of 100 octane gasoline to the Army, Navy, and Marine Corps

AIRCRAFT PRODUCTION

AWPC 'Learning Curve' Shows Rising Labor Efficiency

Manhours needed to build typical fighter reduced from 157,000 to 7,900 in 1,966 planes, labor turnover declines rapidly.

By JOHN HERSHEY

How aircraft manufacturers are able to continue building more and bigger warplanes with relatively fewer manhours is answered in part by what the industry calls the "learning curve."

The Aircraft War Production Council (see cover) in seeking an answer to the question, found out that in building a typical fighter plane the first plane is some 157,000 manhours away from the production line. Model "A" took 157,000 manhours to build.

Manhours Reduced—The 15th plane of that model took 56,000 manhours. By that time the engineers were beginning to discover ways and means to improve the airplane and consequently the 12th plane was a slightly revised model, which still took 59,800 manhours.

Despite design and model changes and specification revisions, the 10th plane took only 36,568 manhours to build and the 1,000th only 7,900 manhours.

In the case of this typical fighter plane, there was a 72 percent increase in manhours required each time production was doubled. Worked out in a table—it looks this way:

Typical Fighter Plane

1st plane—Model A	157,000 manhours
10th plane—Model A	36,568 manhours
15th plane—Model A	56,000 manhours
12th plane—Model B	59,800 manhours
100th plane—Model A	15,700 manhours
1,000th plane—Model A	7,900 manhours
10,000th plane—Model B	7,900 manhours

When it is remembered that the aircraft industry on the West Coast is scheduled to build half again more weight of planes in 1966 than it did last year, it appears that the job can be accomplished with relatively small increases in manpower requirements. The qualifying element which enters, of course, is that the industry will extend and continue its strides in production efficiency and that it will continue

Bombers Still Gain

January aircraft production not only reflected a 5 percent gain in airplane pounds over January, despite fewer total units built, but reflected an average unit increase in heavy bombers of ten percent, according to officials.

The record was described as more impressive in light of a unit decrease in bomber planes from January by about 200.

Despite February's lower working days, it is felt in the industry that this month's airplane production output will be ahead of that for January by at least a small margin.

manpower labor utilization, work simplification, labor pooling, work retraining, and that it will continue to cut down turnover.

Labor Turnover Drops—A major decline in labor turnover, for many months one of the principal handicaps of the West Coast airplane industry, has been reported by the Council. December figures on quit rate for one company, for example, fell from 6.6 percent to 3.97 and other available data also indicated the downward was continuing.

The figures covering the seven Council companies—Boeing, Consolidated Vultee, Douglas, Lockheed, Northrop, North American and Ryan—indicated a growing realization on the part of aircraft workers that staying on the war production job means more planes,

a shorter war, fewer casualties.

Bomber Manhours Cut—Supporting statistics showed that during November the companies lost only 10,548 workers from all causes compared with 17,543 the pre-October month and a July-August-September average of 22,257. Incomplete figures indicated that the December total would be well under November and that January would show further improvement.

Statistics covering heavy bomber production, one of the top priority combat planes in the 1944 production schedule, show that what is true of the typical fighter plane in manhours needed also is true of a typical four-engine bomber.

For example, the first off the assembly line required 800,000 manhours. Then tenth took 187,500 manhours, the 25th required 127,500 and the 100th only 61,500.

Reduced to 12,000—The 300th rolled off the line requiring only 30,000 manhours and by the time the 1,000th was reached it was down to 12,500. The 1,000th plane left the assembly lines with just 12,000 manhours behind it. This represents a decline of about 75 percent in manhours required each time production was doubled in the case of this typical four-engine bomber.

In these and the fighter manhours figures lies a great part of the answer to the question as to how the aircraft industry continues to build more and better warplanes with relatively fewer manhours.

New Film Protects Magnesium Alloys

Anodic coating developed by Consair makes metal noncorrosive and abrasion resistant.

Discovery of a protective coating enhancing the use of magnesium in construction of large aircraft has been disclosed by Consolidated Vultee, whose development engineers describe the electrolytically-induced coating as an anodic film that makes magnesium alloys an anti-corrosive and abrasion-resistant as aluminum alloys.

The engineers point out that magnesium alloys would be of particular value in the light aircraft projected for the future where a saving of several thousand pounds might conceivably be effected since planes of exceptionally long range require as much as two pounds of gasoline for each pound of additional



VETERAN AAF TUNNEL CARRIERS ON:

One of the nation's earliest used carriers, built in the middle 20's for old McCook Field and later moved to the Material Command's base at Wright Field, is still in use. Diameter is five feet, and maximum air speed is 215 mph.

total weight to maintain its range. **Resistant to Corrosion**—The new film is described as extremely light and very resistant to electrical currents and abrasion and readily withstands the potential of 110 volts which, together with its resistance to wear and impervious surface, accounts for its ability to resist corrosion.

Coating engineers say accelerated tests show magnesium alloys coated with the new film holding up as well as anodized aluminum, and that the abrasion resistance is 93 to 100 times superior.

Research—Search for the coating was undertaken in 1941 in Consair's San Diego plant, but the satisfactory method was developed only recently at the company's Fort Worth division.

Fisher Body Works On "Superfortress"

Company reveals it is participating in four plane programs and is tooling for new fighters.

Fisher Body division of General Motors has been permitted to disclose that it is taking part in the manufacturing program of the Army's new bomber, the Superfortress, which brings to four the number of plane programs to which this division is a contributor.

Tooling for Fighter Plans—In addition to the Superfortress program, the division is building major assemblies and parts for the B-25 Mitchell bomber and is tooling to build a fighter plane, details of which have not been disclosed. In addition to planes, plane parts and assemblies the company is also building in the aircraft field aircraft instruments including gyro direction finders, gyro horizon indicators and cyclic reading magnetic compass indicators and transmitters.

E. F. Fisher, general manager of Fisher Body, and the division is building major assemblies and parts required by the three assembly plants currently engaged in the plane's production. Fisher also said eight of the company's plants in Michigan and Ohio were contributing to the program.



Chamber Statistical Committee Meets: Representatives of the Army, Navy, War Production Board and other government agencies met with the statistical committee of the Aeronautical Chamber of Commerce recently to promote a continuing program of operation beneficial to industry and government.

Shown here, left to right: E. Earl Lockrey, manager, Chamber's Statistical Department; A. T. Hays, Republic Aviation, chairman of the Statistical Committee; James Murray, Boeing, president of the Chamber; and J. M. Fisher, Douglas Aircraft, chairman, Chamber's Economic Development Committee.



PROTECTION...



of Vital Production

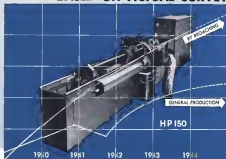


of Vital Manpower



of Vital Time

BROACHING PRODUCTION FIGURES BASED ON ACTUAL SURVEY—



The LAPOINTE Machine Tool Company
HUDSON, MASSACHUSETTS U.S.A.

Buick Plant Tools For New Twin Wasp

Engines to be built mainly for cargo planes, firm says.

The aircraft industry expressed interest in an announcement that the Buick Division of General Motors is looking to manufacture a new high priority cargo plane engine of the Pratt & Whitney Twin Row Wasp type, but beyond the announcement there was little additional information available.

The engine, it was learned, is a 14-cylinder radial developing 1,300 horsepower, is comparable in most respects with the Pratt & Whitney R-1690-43 engine, being manufactured by Buick for the Liberator bomber program.

Extra Tools Installed—Marlow H. Currier, Buick general manager, said the new production would be carried on in the same plants in Flint and Milrose Park, Ill., in which the better engines are manufactured with many of the parts and sub-assemblies being produced on the same machines and assembly lines.

Currier said additional tools to accommodate the design changes are being installed and early production of the engine is anticipated.

New Contracts Approved—Currier said about 80 percent of the fabrication will take place in the Buick plants at Flint with the rest of machining, final assembly and testing at Milrose Park.

It was announced previously that the Army Air Forces had approved new contracts with Buick involving millions of dollars for the cargo engine, in addition to number airplanes scheduled. Buick has manufactured more than 35,000 engines for Liberator bombers.

Group Incentive Plan

Prattville Tire and Rubber Co., has been authorized by the War Labor Board to put into effect a group incentive plan covering approximately 2,500 workers at its Aviation Products Division, Akron, Ohio.

It provides a standard based on the average efficiency in a previous four weeks period agreed upon by the company and the CIO United Rubber Workers. Under the plan, a one percent bonus would be paid for every two percent of efficiency over the standard. The bonus program will be adapted weekly.



EVERY HUNDREDTH FORTRESS WEIGHED

Every 100th bomber at Boeing Aircraft is carefully weighed to determine if the center of gravity falls within limits prescribed by the designing engineers. This new man shows the three scales designed by Boeing engineers, in position for the weighing operation. The job usually is done during early morning hours when there is a minimum of plant activity and vibration.

Goodrich, Bendix Develop De-Icer

New system is product of 10 years' research.

Plots are given accurate and instantly variable control of their de-icer equipment in combating all types of ice formation. B. F. Goodrich Co. and Bendix-Premer division of Bendix Aviation Corp. report.

Engineers of the two companies have spent more than 10 years of research on the new method, technically known as a manifold actuated de-icer system with electronic control.

Flight Tests Made—W. A. Baichtel, director of engineering for Bendix-Premer, said it already has passed rigorous flight tests along routes flown by the Army Air Transport Command and Royal Canadian Air Force pilots.

Using rubber "boots" originally developed by Goodrich and now standard winter equipment on American commercial and military planes, the new system is said to make possible a more selective method of softening and deflating the tubes along the wing edges so that ice broken loose by the pulsating rubber can be carried off by the slip stream.

Control System—J. E. Gulick, of Goodrich, explained that once his

company first developed the mechanical rubber de-icer in 1930, it had been working with Bendix to perfect a control system which would give more flexibility than the simple recurring cycle of inflation and deflation used up to now. This cycle was fixed at approximately 40 seconds and could not be altered while plane was in flight.

"The new device," Baichtel explained, "enables the pilot to vary the frequency of the pulsations to give maximum effectiveness in relation to the thickness and type of ice being formed." Also, by means of push buttons, the pilot can set into regular cycles and single out sections of wing or tail surfaces which require repeat treatment—without interrupting the system's regular automatic operating cycles.

Simplified Plumbing—Instead of the central air-pressure distributor and multiple taking lines used heretofore, Bendix engineers explained, there is now a simplified "plumbing" system, the pressure and vacuum manifolds of which are located at the individual de-icer boot connections. The manifolds are operated by hydraulically-actuated distribution valves, precisely and uniformly controlled by an electronic timer. The "simplified plumbing," they said, has made it possible also to have up to 50 percent greater inflation rates when needed to combat extra-heavy icing conditions.

FINGER-TIP CONTROL

for MARTIN

**A G-E Engineered System That
Facilitates Accurate Aiming at 300 Mph**

• Enemy fighters braving 'round a bomber can make things tough for a turret gunner. But one thing now made easy for him is the control of his turret—a job that a G-E control system can do electrically.

In a Martin turret, the gunner does not have to move the guns themselves. He simply turns his control handle—the turret and guns move correspondingly. Smoothly, speedily, and without effort, the gunner is able to train and hold his guns on the enemy plane.

Exactly what this highly successful system

comprises and how the various elements are connected cannot be told. But typical components are described at the right.

Designing and producing aircraft systems for flight, radio, and power plant control is becoming an increasingly important phase of General Electric engineering. For information regarding available systems, and consultation regarding new projects involving electric control, write to the nearest G-E office. *General Electric Co., Schenectady, N. Y.*

Training G-E turret system for Martin turret under firing conditions



TURRETS

**The G-E Turret Speed-
control System**

This typical G-E aircraft system facilitates control of the turret and its guns. While its layout and equipment specifications cannot be revealed, components include the following:

1. TURRET DRIVE MOTOR. Standard G-E 24-volt d-c intermittent-duty unit of rigid construction and light weight. Equipped with steel shell, aluminum or magnesium end shields, and double-shielded ball bearings.

2. AIRCRAFT AMPHIDYNE. Provides accurately amplified power (up to 10,000 to 1) from low control-field excitation, and instant response, bearing smooth, dependable performance under rapidly changing conditions.

3. REVERSE-CURRENT RELAY. Automatically connects or disconnects generator from bus. Opens main contactor on reverse current of about 10 amp. Will interrupt reverse current several times rating of relay.

4. VOLTAGE REGULATOR. Controls generator field current and maintains constant voltage under varying generator speed and load. Equipped with equalizing coil for equal division of generator load in multi-engine aircraft.

5. AIRCRAFT D-C GENERATOR. Supplies electric power for G-E "power packages" and other electric equipment, as well as for heaters. Especially light in weight with high over-load capacity. Special shaft construction withstands vibration and torque pulsations.



**PRECISION PRODUCTS
AND ENGINEERED SYSTEMS
FOR AIRCRAFT**



GENERAL  ELECTRIC



Strength from a better machine by a better Breeze machine, so it is our second mark.

While our ship was on the ground, I spent a Breeze ignition shield and told the mechanic, "I used to build 'em." He quipped and said, "But damn, shield there it and with that my chest expanded to twice normal, it's a compliment like that from a motor doc reflects the swell job you folks are doing back home there on the production line. Keep it up!"

-what's in a Name

It All Depends on Past Associations and Present Circumstances

There's plenty in a name—when it's the familiar trademark of an old employer, and a new man across thousands of miles from home.

It means a lot to him then, because he knows first-hand of the skill and experience that went into the manufacture of the product, of the inspection that it went through before it was judged worthy to wear that trademark.

And then he realizes what that name represents—the pride of a manufacturer in a product, confidence in the future of the company. The trademark becomes a symbol of opportunity for the day when men will resume their places once again in a peacetime world.

That's what's in a name—a reminder of the past and a promise for tomorrow.

Breeze **SPEED**
CORPORATIONS, INC.
NEWARK, NEW JERSEY

PRODUCTION FOR VICTORY • PRODUCTS FOR PEACE

Flight Schools Look For Post-War Jobs

Hope to continue as training centers for Army-civilian joint program.

Flight training schools in the South and West are looking to the post-war future, in the hope that they may continue as training centers for an Army-Civilian joint program for maintenance of an effective air force.

This hope was expressed by J. Wendell Coombs, president of the Aircraft Manufacturers Association, at a two-day report conference of many civilian flight school operators at Atlantic City, Coombs said safety and efficiency records resulting from the Army-flying school partnership have been so outstanding that they represent consideration as a permanent policy.

Mortality Rate—H. H. Arnold's forecast in creating a setup to speed building a mass air force, has taught more than 100,000 young Americans to fly. The quoted rate figures indicating that the fatality rate for primary flight is one for every 62,676 hours flown, or, on the basis of 100 mph., one for every 4,971,990 miles.

"You operators," Coombs told the group, which also met to talk about Army contracts, "have earned the confidence which Gen. Arnold placed in you. Now that the war is progressing favorably to the United States, indicating a move up in the pace of outfit training, there is reason to believe the training program will continue on a replacement basis."

Civilian Co-operative System—"Although the War Department has given notice that 13 of the schools are to be placed on a standby basis within the next few months, it may be that your major responsibilities will be increased during the war. Certainly the Army-Civilian co-operative system will be continued after the war, because of its efficiency and safety."

More than 60 schools have membership in the society, but their students are much smaller.

Chases Breeze—Back in May, 1938, when the war clouds were gathering, Gen. Arnold, commanding general of the Army Air Force, called a little group of private air school men into his office and told them that it appeared as if they would have to start training pilots for the Army.

Air Bills Swamp Legislatures

Symbolic of the increasing situation are growing numbers in the introduction last year 16 state legislatures of approximately 1,000 measures dealing with aviation or containing provisions relating thereto. More than 100 of them passed and became law.

Compilation of these laws by Harry Maxwell, state relations director of the Air Transport Association, shows that most of them applied to the broad general use of airplanes for private or commercial purposes. Exceptions applied specifically to acquisition, ownership, operation of commercial planes by air transport companies or those engaged in such extensive use for competition in crop dusting, aerial photography and sky writing.

All but Four States Pass—Legislatures in all states but Kentucky, Louisiana, Mississippi and Virginia met in 1943. These considerations of aviation matters resulted in a preponderance of legislation enabling municipalities to engage in aeronautical activities. Restrictions applying exclusively to air carriers were not so numerous.

The 1943 state aeronautical law enactments, Maxwell found, "covered the more fundamental aspects of aviation which state lawmakers have dealt with since the first state aeronautical law was passed in Connecticut in 1911. First, these had to do

with functions delegated to state administrative officers or agencies by state legislatures and second, those assigned to municipalities or special municipal corporations created to handle aeronautical functioning of contiguous political subdivisions.

Congresses—A few in the first category provided for cooperation between state and municipal agencies or state supervision in administration of the laws, but most left their creation up to the municipal bodies.

Maxwell's report listed among the broad general considerations covered in the new laws: regulatory matters, regulatory for aviation in general, regulatory for commercial aviation, airports and airport matters, flight strips, law matters, fees, and aeronautical research and planning, and education.

More a Sight—Outlook for 1944 is for more laws along these lines in the states whose legislatures met in 1944 Maxwell believes. In addition, to regular sessions in Kentucky, Louisiana, Mississippi, New Jersey, New York, Rhode Island, South Carolina and Virginia he expects special sessions in other states, in view of demand for state aviation voting laws.

If 1944 enactments be following the pattern of those in 1943, he forecasts particular emphasis on measures enabling municipalities to establish, maintain, finance, and operate airports.

The response was immediate. Schools were set up and soon classes—of about 30—were under way that it was not enough, and in 1940 there was another conference,

and this time the classes were ten times as large.

The society, which coordinates the work, has headquarters in Washington.



CREW LIGHTENED CRIPPLED MARAUDER:

A photographer in a nearby plane caught this picture of ammunition belts being hauled from a gun position of a crippled B-24 Marauder to lighten it. Its left engine had been shot out by German flak over Italy. It reached its base safely.

PERSONNEL

Canada. H. French has been appointed director of a newly created Industrial Relations Dept. at Boeing Aircraft Co.



French

French, to direct the personnel division, medical unit, labor relations and training activities, and assist in leading and supervising service organizations. French was formerly with the Industrial Relations Consultants of New York City. In his present capacity he will direct activities at Seattle and Boston, Wash., and advise for the Wichita and Vancouver, B. C., plants.

Hugh B. Perry, vice president of Waco Aircraft Co., has been given the additional position of general manager. Chas. A. Lohr becomes advertising and public relations director for the company.

W. F. Wilkins is new general manager of the radio division of Bendix Aviation Corp. at Baltimore and Red Bank, Md. He has been director of sales and engineering of the radio division and succeeds Hugh Beane, who has been given a special assignment for Bendix.

Myron L. Hest, formerly secretary of Winton-Salem Chamber of Commerce, has been appointed director of public relations for Fairchild Aircraft Division. He succeeds Matt Sharpe who has resigned to return to a former position at head of the State's Advertising Division.

Capt. John Daily Lewis has been appointed superintendent of American Airlines Trans-Atlantic Division. He was transferred to military operations in September, 1943, and has

served as division superintendent at the company's Prestwick, Scotland base, as superintendent of American's South Atlantic division in Natal, and supervisor of the company's operations in the China-Burma-India sector. Capt. W. E. Mafak, who has been superintendent of the North Atlantic, will assist Lewis.

Robert Doman, vice-president and general manager of American Airlines, Inc., has been elected a trustee of New York Trust Co.

Alexander P. de Soreville is being awarded a degree of Doctor of Science at Rollins College, Winter Park, Fla. While in the South, he will conduct a lecture tour.

F. L. Helzer has been named manager of the De Kalb division of DeSoto Aircraft, in addition to his position as vice-president of the company. At the same time W. E. Arnes was named production manager and H. F. Cook, factory superintendent under Helzer.

David E. Shugart has been made traffic manager for American Airlines at St. Louis. He was formerly traffic manager in Louisville, Ky. He succeeds Marie Heiler, who has been assigned to the personnel department in New York. Andrew B. Eckhardt succeeds him in Louisville.



NEW NAA PRESIDENT AND FORMER CHIEF:

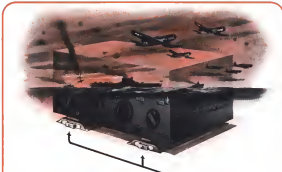
William B. Eby, left, has succeeded Capt. Gill Robb Wilson, right, as president of the National Aeronautics Association. After serving four terms, Captain Wilson resigned to become assistant editor of the New York Herald-Tribune, but will remain as a member of the board of directors of NAA. Eby, president of Seawoods Aeronautics, Inc., has been vice-president of the association.



John A. Lee (right), manager of manufacturing development of the Airplane Division of Curtiss-Wright Corp., has become acting works manager of the Buffalo plants now in production of the C-47 Commando. R. M. Haffner (left), division manager of production control has also been "told" down the Buffalo Division staff of Curtiss-Wright, to be acting head of materials and parts control, reporting to Mr. Lee. The expansion in the program requested by the AAF has necessitated these changes, Curtiss-Wright announced.

John Gollups, Transcontinental and Western Air, Inc., vice president, operations, has been elected chairman of the Operations Committee of the Air Transport Association. H. E. Bledsoe, vice president, operations, for American Export Airlines, and G. R. Houser, vice president of operations for Continental Air Lines, are new members of the committee of five. Hugh Smith, American Airlines vice president for operations, and former chairman of the ATA committee remains a member. Fifth member is K. B. Peggins, operations vice president of Northwest Airlines.

Norman A. Pierce has joined American Airlines as operations engineer.



SO SMALL BUT SO IMPORTANT

Vibration is tough on aircraft radio. Formerly radio manufacturers have had to beef up their equipment to withstand vibration and shock, as applied during Government type tests and in active service. A new "floating" suspension is now available, however, and recently additional radio manufacturers have adopted the Robinson principle of vibration control for the radio shock mounts.

THEIR REASONS:

1. The full force of destructive vibration is not damping is absorbed by this new type of mount before it reaches the radio equipment. Vibration absorption is over 90% with initial amplitude actually less than one twentieth of an inch, even in high-powered airplanes.
2. Radio equipment can dispense with excess weight and substantial mechanical structure, formerly added to enable the equipment to pass "force checker" tests on vibration tables.
3. Excess heat damping vibration is blocked out. Mechanical and electrical failures are virtually eliminated under extreme military service conditions.
4. More sensitive and efficient tubes can be used. These latter would not pass type tests

or give reasonable service life. Precision but delicate electronic tuning devices will be protected.

5. The normal life of radio equipment will be extended tremendously, with less time out for servicing. This feature will increase passenger and freight volume.

6. Radio engineers are relieved of the problem of shock mount design and construction and location of shock units. The Robinson system also handles the engineering work and for studies needed performance are shown in current accompanying each model.

7. These mounts have been tested and are used by the U.S. Navy and the U.S. Army.

* Western Electric and Westinghouse are using Robinson-designed and built aircraft radio shock mounts, for supporting equipment furnished to the U.S. Navy and the U.S. Army. More than 15 new designs are under way for other radio manufacturers, leaders in this field.



ROBINSON AVIATION, INC.
720 Fifth Avenue - New York 15, N.Y.

Person who employed by the U. S. Army to set up the engine of the engine and instruction for flight engineers on all four-engine bombers.

Dr. E. L. Dawd, chief medical officer of Trans-Canada Air Lines, has received a fellowship in the American College of Surgeons. He was also elected an Associate Fellow in the Aero Medical Association of the United States in recognition of his work as aviation physician. In addition to his TCA work, he is an Honorary Wing Commander of the RCAF for which he is medical consultant on all aviation. He is also medical consultant to the RAF Transport Command and has charge of medical services in Canada for British Overseas Airways.

Dr. W. L. Barnes, director of the central research of the Sperry Gyroscope Co., laboratories, has been awarded the Morris N. Leshman Memorial Prize of the Institute of Radio Engineers' banquet. He was elected for his "theoretical and experimental investigation of ultra high frequency propagation in wave guides and radiation from horns, and the application of these principles to engineering practice."

Kenneth C. Rose has been appointed assistant to Daniel Patrick, Jr., president of Boeing Aircraft Corp. He was formerly executive officer for the Office of Public Administration in Washington, and has assumed his duties replacing Ray A. Welton, formerly executive vice-president.

Frank H. Phillips (left) and C. Arthur Smith (right) were elected to the



Phillips

Board of the Ryan Aeronautical Co., at a recent meeting. Phillips is president and director of Western Wire Co., of Philadelphia, E. L. and a director of other companies. He has been a substantial shareholder in Ryan Smith is chairman of the board and vice-president of the United States National Bank, San Diego.

Lee N. Bates, who was asked by the U. S. Navy to become president of the Lakeside Aviation Corp., of



Bates

Tucson, N. J., in April, 1942, has announced his resignation from the company. The firm has been exposed largely in subcontracting for Grumman Aircraft Engineering Corp., according to Bates, who was formerly executive vice-president and general manager of West Aircraft Co., at Troy, Ohio.

Harry Agterberg has returned to Engineering and Research Corp., where he is sales manager, aircraft division.

Mary Lee McCoy (photo), Transcontinental & Western Air, Inc., has been four years, but has named shared business of the Eastern division with headquarters at Long Beach, Calif. N. Y. She succeeded Margaret Clark, who is now chief business of the Mid-West division.

F. T. Wood has been appointed assistant to the vice-president, Trans-Canada Air Lines, with headquarters in Winnipeg. He has been with the air line since its organization in 1937.

Thomas Sewell Dady, Jr. (photo), is the new chief representative for Transcontinental Western Air, Inc., Boston area. He will serve as the staff of Merion D. News, Boston traffic manager.



Dady

Miss Blanche Weaver, formerly construction and ticket agent in Washington for American Airlines, has become manager of the main ticket office and is the first woman manager in Washington. She will be assisted by Miss Myrtle Powell, also a former ticket agent, who will be located at the new Hotel Bristol office.

Arthur Dunge has been named plant manager of Columbia Aircraft Corp., Long Island. Dunge was formerly with the Aircraft Division of Continental Can and Lockhead Vega.

Lt. Col. John U. Wagner is commanding officer of the newly established Dayton Army Air Field, successor of Wright Field, Dayton. The sub-base, formerly known as a Northwest-Vandenberg Modification Center, is at Dayton municipal airport.



Vandenberg will be completely operated by the Army at the expiration of the contract now held by Northwest Airlines on Apr. 3. Originally set up as a base for wedding production planes for special use in western theaters of war, the base has become more and more a center for accelerated flight service testing of new airplanes, with the production work becoming less important. Col. Wagner was formerly executive officer of the accelerated service test branch at the base and had been plant production chief at Wright Field.

The name of the late John C. Meek has been given to a new Liberty ship, Meek, Boston shipyard, is credited with having the trail for Pan-American Airways over many of the western air routes will bring use.

Glen E. Carter has been appointed field representative of the Aeronautical Engineering Society in the western territory. He was formerly with Wood, of public relations representing the War Department at Fort Leavenworth.



Wash. Center will be located in Dallas, where he will function as liaison between the AAF and the GI schools of the ATB.

Edward J. Ryan has been named public relations representative for Pan American Airways in Los Angeles. He was formerly assistant Eastern division public relations manager for PAA at Miami.

TRANSPORT

Wichita Confers Correlate Plans For Post-War Civil Flying

Kansas State Aviation Conference delegates bear demands for immediate planning of airports to accommodate private flyers and feeder lines.

Take your airport to your community and its needs, and start planning now. That was the consensus of speakers at the Kansas State Aviation Conference last week when 326 delegates

Reports and advice came from Kansas aviation executives and representatives of airlines serving the state. The airport is fundamental. After it will come private lightplanes, feeder airlines, and truck lines.

Midwest Interested—Reflecting the rising enthusiasm for private aviation, which is apparent especially in the Midwest, the speakers referred to one Kansas airport firm, unofficially identified as Cessna, with a million dollars in war bonds on deposit from probably 1,000 families as advance payment for an improved lightplane to be built after the war.

A spokesman for Cessna and his firm has returned thousands of dollars sent as deposits on post-war private planes.

Post-War Air Cues—Don Flower, sales manager for Cessna, told how delegates will enter the Cessna car of the air shortly after the war for their first demonstration. "You will taxi this airplane and find it very simple, like driving your car. Once at the end of the landing strip we will advance the throttle. You will continue driving but you will leave the ground."

"You will make that takeoff and you will find it easy to fly. You will make two or three practice landings." One out of every ten persons will be able to do all the first demonstration ride, without physical assistance from the check pilot. After that it will be hard for anyone to convince you that you don't have what it takes to fly, although obviously you will need some more practice before you go on your own."

Necessary Features—All delegates stressed airport planning—

size in proportion to community population and requirements, and no airports, but with space to grow, adequate drainage, sufficient landing strips of prescribed lengths and directions, for clear ap-

proaches, careful location of hangars and buildings, bargains planned especially for small planes, which can be moved through the nearest door.

Flower Forecast—The intelligent owner is more and not large landing fields, said T. E. Flaherty, superintendent of airports for CAA's 9th region, who advised as the first step the small towns development of a small flying field without paving, large hangars or expensive facilities.



CAA TESTS LANDINGS, TAKEOFFS:

Scenes at Washington National Airport show Civil Aeronautics Administration testees with cameras obtaining data on landing and takeoff characteristics of various planes. Material is expected to be reliable in airport planning studies.

These are sufficient to attract schools. These sales and service, sportsmen jobs, advertising and photography operations—these are the bread and butter of aircraft operation. Yet, their airport requirements are least expensive.

Legal aspects of airport planning were outlined by Albert B. Martin, general counsel for the Leasair of Kansas Municipalities, at Topeka. Emphasis for acquisition, construction and maintenance, assessment of possible revenues, acquiring easements controlling nearby property, and survey of state and federal regulations before construction were stressed.

Unless provision is made by the federal government to subsidize airport development on some basis, it is unlikely that the future airport needs of aviation can be met, said Alfred MacDonell, director of the Wichita Board of Park Commissioners, speaking on "airport development and operation."

Airlines Represented—Airlines men were divided on possible further routes and better service on trunk lines. S. B. Warren, assistant to the vice-president-traffic for TWA, expressed the line's con-

cerns in the future of fixed base operators who "will bring air taxi service to the small communities which cannot afford fancy airports." He sees maximum public service through orderly development of local services by locating trunklines, establishment of mail-express pickup services and air taxis for other communities.

Bestall Airways' Special Representative, William J. Lowman, presented his company's post-war plan for Kansas, listing new routes already applied for. "There is no legal stumbling block to extension of air service to include small communities," he said, although all present U. S. air carriers are now certificated to serve only 18 cities of less than 10,000.

Confidential Policy—Donald A. Duff, executive assistant, Continental Air Lines, said his line is the only presently operating U. S. company that has not filed applications for routes outside the borders. It is dedicating its planning "to the serious thorough development of service in the states that we now serve or propose to serve."

Warren, chief of CAA of new air transport operators would "dis-

astrously affect" not only the new contractors but the entire airline system," said William A. Ong, Kansas City school operator and president of Consolidated Airlines, Inc., which proposes to operate air service to all of the state's 100 county seats.

Data on Landings, Takeoffs Compiled

CAA report on study at ports throughout U. S. near completion.

Civil Aeronautics Administration expects to have a report soon on tests it has been conducting for several years on landing and takeoff characteristics of aircraft under varying conditions. Under supervision of A. L. Moore, chief of the division's aircraft section, the report has been drafted and is being prepared for release.

Started in 1938—Aimed at correlating information on air accidents that will help in future airport development, the tests started in 1938. Three or four years were required in experimentation with various types of equipment until the cameras, recording devices and other paraphernalia had settled to the job were determined.

Collection of information has been going on since 1940. Tests have been made at various airports of differing altitudes and climates throughout the country. They have been conducted under differing combinations of wind speeds, barometric pressure and temperature.

97,000 Certificated*

About 97,000 private pilots have been certificated by Civil Aeronautics Administration. CAA gave the number in answering elimination of requirement that would-be student flyers prove to CAA they are training for a specific war job.

Such proof had been necessary since early last year under a WTB order, recently withdrawn, limiting sale and rental of aircraft. Restrictions were lifted at the same time on plane rental by private pilots.

Fred Lanier, CAA director of Safety Regulations, explained that the limitations order was designed to make planes available to CAA's War Training Service. Such steps are not necessary now, since use of WTB by the armed forces is dropping off.

Detroit's Airport Sets New Record

Operating profit and new high traffic figures reported by D. W. Martin.

Despite serious war restrictions on air travel and terminal operations, Detroit City Airport announces an operating profit for 1943 and new records in flights, express, mail and other measures as a result of unprecedented industrial war activity in the area.

The report of the 205-acre airport, managed by Don W. Martin for the nation's fourth largest city, shows a striking range of activity from handling 212,641 passengers by three major airlines during the year to answering an average of more than 27,000 telephone calls a day about the weather.

War Precautions—The 1943 weather was described as "75 percent fickle," although a light cleanser system under war restrictions operated until Dec. 31, when some were lifted and civilian pilots were given freedom of the air. The field is an international port of entry and has available a custom immigration office.

The 14,521 airline flights, about 50 a day, meant handling 3,052,134 pounds of mail or 81 percent more than in 1942. There were 176,010 express shipments or 8,051,232 pounds, averaging 34.4 pounds a shipment, or a gain of 85 percent.

Flights Set Record—Landings and takeoffs averaged 947 a day, or a 46 percent rise, representing 334,187. Of these, 18,761 were by airlines, 1,702 military, 1,408 civilian cross-country, and 214,505 local civilian flying.

Mar. 31 set a new record with 3,268 planes moving to and from the airport. There were eight days when the number exceeded 2,000.

Other phases of operations include servicing 186 governmentally based private planes. All space in terminal building and hangars is taken by air interests.

Gas Sales—A total of 578,539 gallons of 13 and 91 octane gasoline were dispensed, excluding 1,000,000 gallons served by the three airlines for their lines.

Seven companies operated planes for training, averaging 10,260 flying hours, up 22 percent over 1942.

Charter Flights—A nightizing and charter service used on planes to carry 18,000 passengers.

The restaurant and commissary served 460,000 customers, plus



ALL AMERICAN'S FIRST WOMAN PASSENGER:

Mrs. Allene C. de Post, widow of the late Richard C. de Post, is the first woman to fly as a passenger on All American Airlines' pickup system. A plane pilot and holder of flying records, Mrs. de Post is on All American's Board. She is pictured with Halley R. Bailey (left), president of All American, and Thomas T. Rischke, chief pilot.

150,000 airline passengers during flights.

The parking lot and garage handled 19,713 cars. Civil Air Patrol's three squadrons comprise 300 members. Most private plane owners are CAP officers, who dropped 593,393 leaflets for the Treasury's second loan drive and 100,000 paper bombs in simulated air raids. The CAP's summer station based at the airport flew 54,332 miles last year, with 5,146 pounds of cargo and 156 emergency or military passengers. CAP's parachute squadrons packed hundreds of parachutes for private pilots.

Other facilities are the Weather Bureau, and CAA surveys and airline offices.

TCA Mail Record

Trans-Canada Air Lines, in its Trans-Atlantic service from Canada to Great Britain, is carrying occasional mail loads in its four-engine Liberators it uses on that run.

Two of these that recently established records for the trip together carried nearly 1½ tons of mail, or about 500,000 letters, and 500 pounds of freight.

'Copter Fire Guards

Use of helicopters after the war to aid in forest fire fighting is being planned by the Ontario Provincial Government's Forestry Air Service.



AMERICAN TRIES OUT CARGO ARRANGEMENTS:

This bus arrangement for cargo is one test which American Airlines has experimented, against the time planes can be built or converted for cargo service. At present seats are left in the slight dividers in some of its cargo runs.

Beaverbrook Speech Studied For Post-War Civil Air Policy

Expresses readiness to join in international conference, virtually invites use of Britain's air bases by other nations.

Lord Beaverbrook's most recent speech before the House of Lords, little publicized, gave considerable insight into Great Britain's thinking on post-war civil aviation.

He expressed complete readiness to join in an international conference, virtually invited post-war use of the Empire's air bases by other nations, and agreed with President Roosevelt's advocacy of the right of freest passage. Nor did he overlook the important part Britain plans to play in the international post-war picture.

Vital Issues.—The first step in the program of post-war international aviation planning, he said, is up to this nation. "There are vital issues as which it will be necessary for the great powers to reach preliminary agreement. We are ready for such discussions at any time. At present we are waiting on the Americans to complete their surveys."

When this international conference will take place, he did not say. But "When the time comes, our first concern will be to gain general acceptance of certain basic principles whereby civil aviation can be made into a benign influence for welding the nations of the world together into a closer cooperation."

Open to All.—"These principles must assure to all countries a free and fair share in this new means of transportation. No nation, great or small, except of course the guilty aggressor nations, must be deterred from taking a full and equitable part in the opening development of civil aviation that will follow the end of the war. It will be our aim to make civil aviation a guarantee of international solidarity, a ministry of the world's peace."

The Lord Privy Seal, who is directing the Empire's post-war commercial aviation planning, said that bases in the Dominions must be separately dealt with, "but as for the bases under our control, let me say at once that the government has no desire to exclude aircraft of other nations. We demand no prescriptive right to the use of aerodromes for ourselves. Rather do we mean to use them for the purpose of steadily developing civil aviation throughout the world."

Future Developments.—Though these bases are many and widely scattered, he added, there are few at which any great volume of traffic can be collected. "And the same, it will be necessary to have

international agreement on traffic regulations and arrangements . . . and essential condition of future developments."

Lord Beaverbrook said he shared the views of William A. M. Bardeen, special aviation assistant to the Secretary of Commerce, that "complete freedom of the air in the present state of the world might result in commercial anarchy."

Beck's Reassurance Program.—And he said he had authorization by the Prime Minister to subscribe to the fullest extent to the President's declaration for the right of innocent passage for all nations throughout the world and for the right to land anywhere for refueling and other non-traffic purposes.

Britain is known to have done considerable work in developing new routes and improving bases. A large part of this was in Africa, where in four West African colonies two-score airports, landing fields, and seaplane bases have been built. Other work, particularly enlargement of air fields, has been done in Egypt, the Sudan, Gibraltar and Iceland. The British government, according to the "London Times," spent all but \$10,000,000 of the \$2,400,000,000 put into new airfields, airports and depots in Britain to accommodate British and American Air Forces.

Post-War Possibilities.—Forecasting "immense possibilities for civil aviation after the war," Beaverbrook asserted the British Government intends to take "full measure of responsibility" for the development.

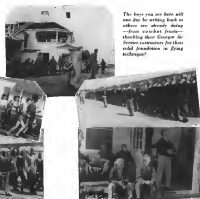
"We are equipped," he declared, "with all the necessary genius for design and development. We possess manufacturing plants and personnel unexampled in efficiency, workmanship and experience. But we have something more as well. We have an expertise in every respect earned to the use of this new means of transportation."

Pain Hopes on Youth.—"In truth, where aviation is concerned, the third British empire gives high hope and great promise. We failed to make use of our opportunities before the war. We did not develop our imperial resources or our vast agricultural wealth in the colonies. Now there is another chance."

And in all of Britain's plans and schemes, he declared, "the youth who fought our battles must be our mainstay. The development of the airways of the empire must be their instrument."

Fledgling Flyers Today . . . America's Airmen Tomorrow!

Hundreds of Aviation Cadets are training today "to fly" as these flying boys every day at Georgia Air Service Schools.



The boys you see here will one day be working back in civilian life, already doing — from scratch! — thinking their Georgia Air Service instructors for their solid foundations in flying technique!

THE actual flying instruction of an Aviation Cadet . . . and the long hours of academic work in the class room . . . are backed up by a program of military drill, athletics and precise Army discipline . . . qualifying Aviation Cadets for the Army Air Forces. A complete staff of Army officers co-operates with our large organization of trained personnel at each of the Primary Training schools

operated by Georgia Air Service, Inc. Life in a Civil Control school is one of a highly organized routine from dawn to dusk . . . with morale high and a spirit of teamwork and comradeship which is instantly recognizable as an outstanding American characteristic contributing to the success of our Armed Forces.

★ ★ ★ ★ ★ ★ ★ ★

Hangar made at Georgia Air Service, Inc. shortly after completion of building in June of 1941. Building, 1000 square feet, 100,000 cubic feet.



GEORGIA AIR SERVICE, INC.
ATLANTA, GEORGIA

Flight Constructors to U. S. Army Air Forces, Bonnettville, S. C., and Jackson, Tenn.



Voices Air Policy. Lord Beaverbrook (left), led group and, whose speech before the House of Lords is regarded by American aviators as possibly shaping Britain's post-war policy on civil air commerce. He is shown, on an earlier visit, with William S. Rowland, now a lieutenant general.

U. S. Takes Its Time For Air Conference

British eagerness to promote formal sessions on aviation fields to speed State Dept. plan.

State Department arrangements for a conference between the United States and Britain on post-war air problems still are in the most preliminary stage. It will appear at week-end that, even when scheduled, any formal meeting of representatives of the two governments and possibly other interested countries would be mainly for the exchange of ideas and information, with formal agreements left to the future.

Proposals for unofficial meetings of air transport representatives from various countries have been advanced, but there was no official announcement that an inter-governmental conference was imminent.

Previous Plans Fall Through—Such a series of discussions has been expected for a year but plans have fallen through each time it appeared near. Reports of the pending consultations have more foundation, however, than previous ones, and some aviation authorities believe plans will be hastened.

The representatives probably will confer in this country and will comprise influential officials of their respective governments.

A purely Anglo-American aviation conference would be highlighted by a penetrating study of the future of the air bases built by the United States on British territory. Most aviation quarters consider this the outstanding point of possible friction affecting post-war international commercial aviation. The desire to settle the

problem reveals its complexity on both sides of the Atlantic.

Land Rights—What the conference will have to determine will be the extent to which landing rights will be granted the United States on these bases, and a complicated business of lease-trading may result.

The United States has the equipment. It desires to become a great trading and carrying nation. Great Britain has the territory. It needs to recover its position as a great trading and carrying nation.

This will lead the impending conference into the question of freedom of transit and reciprocal landing rights for commercial aviation. Strong representations will be made, too, by some countries, in behalf of some kind of international air authority. In Washington, those who study the question believe it is quite likely that the post-war period will see formalization of an international body to make recommendations to the various governments, but they question whether it will have authority beyond that.

Exploratory—There are questions that many feel must await a final peace settlement and for that reason are so unlikely that the aviation conference now being prepared will be more than an exploratory, preliminary consideration of the problem.

President Roosevelt and Prime Minister Churchill have agreed tentatively that the air space should be open to planes at all nations to travel along designated routes with the right of technical stop.

The other members of the commonwealth, however, have some ideas of their own about post-war aviation. Australia and New Zealand favor deeper international trunk routes by international

agreement, retention of full rights to territories on which bases have been built and complete freedom to regulate aviation within their own territories.

Dominion Program—Canada likewise has let the American government know that it intends to work out its own air future on a basis of English preferences, but also that it has no objection to the announced declaration of policy by the United States domestic airlines. Canada apparently favors competition between national, not between airlines.

State Department air officials, however, regard the question of so-called monopoly or competition in the international field, as regards United States lines, as a matter of internal organization and are not likely to bring such a matter before an international party.

Aviation Psychology Institute Formed

Steps to assure continuation of aviation psychological research after the war are being taken with formation of what is described as the world's first Institute of Aviation Psychology at the University of Tennessee.

The Civil Aeronautics Administration, which in 1939 started studies on the human factor in aviation, is cooperating with the Tennessee Bureau of Aeronautics in supporting the Institute. Plans for the school were disclosed at a meeting of the National Research Council Committee on Selection and Training of Aircraft Pilots, which will administer it.

During the war, emphasis will be on military pilot selection and training, but thereafter post-war civilian flying training will receive the emphasis.

SAE Rounds Out Services To Meet Post-War Expansion

Air Transport Engineering Activity Committee named to speed solution of problems in airline operation.

The Society of Automotive Engineers is rounding out its services in anticipation of post-war expansion in air transport. Recent announcement, concerning appointment of an Air Transport Engineering Activity Committee "to facilitate cooperative solution of engineering problems arising in air line operation."

Blending this group, eleven of SAE's professional activities, is William Littlewood, engineer vice-president at Aeronautics Air Lines. Littlewood is well known for his work on the Aircraft Requirements Committee of Air Transport Association and Air Corps, Inc., which is studying possible needs in post-war air transport.

Committee—In addition to Littlewood as chairman, members of the new SAE committee are Tom Wall, Western Air Lines, vice chairman, Charles Prosser, Eastern Air Lines, meetings chairman, H. D. Haskins of the Civil Aeronautics Administration, membership chairman, W. G. Adams, Senior, Bellini Corp., Peter Adams, Jr., Detroit, A. L. Beall, Wright Aeronautical Corp., A. W. Dallas, ATA, Cal. Harold R. Harris of the Air Transport Council, J. A. Herby, United Air Lines, R. G. Lawson, Northwest Airlines, Harold R. Porter, Transcontinental & Western Air, Capt. C. H. Schellhaas, Naval Air Transport Service, Hamilton City, and Robert Warren, vice chairman of the Civil Aeronautics Board.

Personnel of the committee has been elected since SAE's annual War Engineering meeting recently at Detroit. Announcement that the new activity was to be established came at the close of that meeting. The committee will consider engineering problems of air transport operations and work with air line engineering departments.

Functions—Its functions in the air transport field will be similar to those of SAE's Transportation and Maintenance Engineering Activity in highway transportation. Since SAE Aircraft and Aircraft Engine Engineering Activities already were equivalent organizations, the new group will concern itself primarily with operations.

will foster an Air Corps Meeting program, and other meetings within its scope.

"Continuation of the progressive activity," the SAE says, "indicates recognition of the growing engineering needs of air transportation and of the expected post-war expansion of air line passenger and air cargo services."

Jones Asks Bigger Budget For CAA

Commerce Secretary Jones tells Appropriations Committee cash should be revised

Special consideration of the Civil Aeronautics Administration Budget for 1945 by the House Appropriations Committee, with a view to its revision, was requested by Secretary of Commerce James Jones.

Hearings on the Commerce Department Appropriations Bill disclosed that Secretary Jones told an appropriate subcommittee that he considered it "imperative" that cuts in the CAA budget be restored.

Total budget estimate for 1945 was \$34,049,000. Original request for the bureau was for \$35,000,416.

Would Delay Facilities—Before CAA Administration Charles I. Sutton went into details on the basic requirements of his department, the secretary told the subcommittee that the budget as it then stood would delay further the



PAA MEMENTO

President James Monroe A. Jones (right) was presented with a memento of his recent visit to the United States by Vice President E. C. Young of PAA. Jones is making the presentation, a silver case has engraved with the date's Caribbean notes.

conversion of the airways radio range system from intermediate to ultra-high frequency, considered essential as long ago as five years. Such delay, he explained, would "prolong the difficulties that now exist in operating air navigation facilities by the old means of transportation."

He also testified that stimulation of funds for the automotive testing system for traffic control and safety would threaten efficiency and safety of military and commercial flying in important and congested areas.

Safety Factor—He assured the subcommittee an enlarging aviation's development and safety by threatening further reduction in the administration's staff of safety inspectors. There has been an actual increase in civil flying, Secretary Jones pointed out, contrary to the popular belief that military presence would reduce it. It was on this economic assumption in the fiscal year, he explained, that the safety staff was reduced.

"We feel," he continued, "that there should be an increase in the funds with which to pursue the technical development of aircraft, navigation facilities, and airports."

Must Not Wait—"To avoid the post-war period before going back to its implications," the secretary emphasized, "will impede America's opportunities, and the opportunities for employment, in perhaps



LOCKHEED LODESTAR TOWS ARMY GLIDERS.

The Lockheed Lodestar is proving useful in the Army glider towing program. Shows here, the Lodestar, or C-64, is being used as a glider towplane at a U. S. Army Air Force field in Texas.

BACK THE ATTACK-- IT DRIVES THEM BACK



These instruments are sold at 100 percent of face value. The Liberty Motor Company, 1000 E. 12th St., Philadelphia, Pa. 19107, is the exclusive distributor for the Liberty Motor Company, 1000 E. 12th St., Philadelphia, Pa. 19107.

For Complete, Accurate Tests of Aircraft Pumps of All Types ... Vacuum and Hydraulic

This Liberty Test Unit (Type 111) checks both vacuum and hydraulic pumps at speeds from 700 to 3200 R.P.M. For Vacuum Pumps, input action and output pressure are shown directly in inches of mercury; or how may be read from 0 to 28 in. Hg. For Hydraulic Pumps, input action is shown in inches of mercury; output pressure on a 0 to 4000 p.s.i. pressure gauge. Flowmeter reads from 1.5 to 12 g.p.m. hydraulic fluid. This Liberty test bench is ideal for piston pumps, rotary pumps, rotor pumps, check-ups, and for plane builders. Write for complete information.

LIBERTY MOTORS & ENGINEERING CORPORATION BALTIMORE-1, MARYLAND

MANUFACTURERS OF AIRCRAFT SERVICE TOOLS AND TEST EQUIPMENT



the greatest industry of the immediate future."

He is not hopeful that much of the government's \$1,700,000,000 investment in wartime aviation can be saved after the war. This represents money in plants for manufacture of engines, parts and planes. He does not favor the government's continuing to operate the treatment after the war, he testified, explaining that "We would have no use for the airport."

Unavoidable—When a Congressional suggestion it might be converted to peacetime use, he replied that while the buildings and a substantial amount of equipment could be expected to be convertible to peacetime purposes, much tool and equipment and machinery would not be serviceable.

New Applications Include Airship Bid

Company asks world dirigible routes; other requests filed with CAB during week.

Civil Aeronautics Board received a variety of new applications last week for scheduled and non-scheduled conventional, biplane, prop, jet, and glider routes. None was given a certificate of air line.

Most ambitious was that of newly formed U. N. Airships, Inc., submitted from Washington. The organization, recently incorporated in Delaware, asked authority to operate the following routes, using rigid airships of conventional design with 10,000,000 cubic feet capacity:

- Washington to Buenos Aires via Rio de Janeiro
- Washington to Calcutta via Dakar, Capetown and Zanzibar
- Washington to Moscow via Ghazvin
- Washington to Brisbane via Los Angeles, Honolulu, Changking and Darwin

Other applicants are Empire State Airlines of New York City; South Seaboard Seaway Lines, Inc., of Harvey, Ill.; John W. Foreman of Pocatello, Idaho; Louis Col John C. L. Adams and his wife, Albert E. S. Adams of Panama and Dayton Co., Minneapolis.

• **Feeder Routes Asked**—Empire State Airlines asked for 2,400 miles of feeder routes to carry passengers, mail and express in scheduled operations between New York and Syracuse, New York and Buffalo (three routes), and New York and

\$50 Question

The question as to why proper feeder should supply loads were not answered from DC-3's during the summer months was 100 for George Glavin, New York, master's name, however, in American Airlines' suggestion box.

American's Flagship News acknowledged that "the next night which caused that the next task to be left in the ship last summer has cost the war effort a considerable loss in pound miles of air transportation."

Jackson, all via intermediate points.

The airline would employ six twin-engine Beechcraft planes with eight-passenger capacity and three or four Stinson "Reliant" Guiding planes with five-passenger capacity.

President of the company is Roy H. Johnson, now general manager of Inter-state American Co., New York.

The vice-president is Albert S. DePue, now a United Air Lines co-pilot.

John E. Schramm, who was formerly a Transcontinental and Western Air research man and now is assistant in the office of the vice-president of Curtiss Wright Airplane Co., Buffalo, will be controller.

• **South Seaboard Lines**—South Seaboard Seaway Lines desires to operate biplane feeder, prop services for passengers, and property in scheduled operations on the following routes: (all in Illinois unless otherwise noted.) Chicago and Cairo, Ill., via points in Illinois, Indiana and Kentucky; St. Louis and Cairo via Centralia, Ill., and Cape Girardeau, Mo.—190 miles; Danville and Rock Island via Peoria—126 miles; Chicago and St. Louis via Decatur and Taylorville and via Decatur, Springfield and Jacksonville on an alternate route—312 miles; Chicago and Springfield via Riverfront and Decatur—225 miles; Chicago and Springfield via Peoria—127 miles; Chicago and Jacksonville via Hannibal, Mo.—332 miles; Chicago and Cedar Rapids, Iowa, via Clinton, Iowa—151 miles; Chicago and Dubuque, Iowa, via Rockford—170 miles; Chicago and Milwaukee via North Shore Route—86 miles; Chicago metropolitan area serving

• **Intrastate Bus Line**—This line, now in intrastate bus operation would use four- and five-passenger vans, trucks, GMCs and Howard planes and twin-engine Cessna, Beech and Lockheed planes as well as helicopter "or similar type aircraft." It would make one round-trip daily on its route.

John W. Foreman, who already has applied for routes in Wyoming, Idaho and Washington State, would operate DC-3's in daily schedules for mail, passengers and property between Chicago and San Francisco via Aurora, Ill., Denver, Cedar Rapids, Port Dodge and Cass City, Ia., Southabot, Neb., Waukegan and Lauder, Wis., Pocatello and Boise, Idaho, Reno, Nev., and Marysville, Calif.—2,520 miles, Bismarck, Ore., and Seattle via Bend and Portland, Ore.—446 miles, Pocatello, Idaho and Los Angeles via Twin Falls, Idaho and Elko, Nev.—330 miles.

• **Carroll Zone Routes**—Colwell and Mrs. Adams applied for various routes within and into the Panama Canal Zone, generally for sight-seeing purposes, but also asked a certificate for mail, passengers and property. Their application states that they organized, financed and directed aviation under the laws of Panama in 1939-41 and propose to resume operations under the name Adams Enterprises in Spanish America. They would use amphibious, four- and five-place light planes and biplanes.

They desire to fly between Cristobal and Belmar, Cristobal and San Blas Islands, Cristobal and Boca del Toro or Almirante, and Belmar and San Miguel Bay. Approximate mileage for the scheduled and non-scheduled operations would be 630.

• **Minnesota Area**—The Dayton Co. desires to carry passengers and property in non-scheduled operations between Minneapolis and Virginia, Minn.; International Falls, Minn.; Minnetonka, Minn.; Duluth, Minn.; Duluth City, S. D.; Moberly S. D.; Mitchell, S. D.; Sioux City, Iowa; Des Moines, Iowa; Ottumwa, Iowa; Davenport, Iowa, and Wausau, Wis., all routes via several intermediate points. The company would use biplanes.

Levens Brothers Air Service, Ltd., Toronto, has applied to the controller of Civil Aviation in Ottawa for twelve airline routes from Toronto, covering more than 50 connections in southern Ontario and Quebec. The company now has air transportation services

Free Enterprise

... INCENTIVES AND TAXATION

There are three principal ways of making a living:

1. Getting on someone's payroll
2. Lending one's savings to business enterprises
3. Starting, or helping to start, a business enterprise

About three out of four of us fall in the first group—we are job-holders. Millions of us get some income, large or small, by lending our savings—directly or through such channels as insurance companies. We are suppliers of loan-capital. About one out of four of us has his own business enterprise, and several millions of us are part owners of business enterprises. Those of us who go into business for ourselves and those of us who are part owners of enterprises are job-givers.

The amount of employment as a community depends, in the main, on the number of persons who attempt to make their living, or part of their living, by giving jobs to others, rather than by getting on someone's payroll. A community seriously desiring a high level of employment and a high standard of living will strive to make job-giving attractive and to encourage a large part of its population to be job-givers rather than merely job-holders.

The number of men who attempt to make their living in whole or in part by starting new businesses or by expanding old ones depends upon the outlook for profits. When the outlook for profits improves, thousands of new jobs open up and thousands of men go to work; and, as men go to work, the farmer and everybody else benefits. When the prospect for profits becomes darker, the demand for labor, capital, and raw materials drops. It may be roughly estimated that an improvement in the prospect for profits of one billion dollars raises the demand for labor by anywhere from two billion dollars to five billion dollars.

One of the principal determinants of the outlook for profits is the amount and the nature of taxes. After the war, the Federal government will need to raise each year about twenty billion dollars in taxes—three times the amount required before the war, and six times the amount required in the Twenties. In the Twenties, the tax needs

of the Federal government were roughly twice as large as corporate profits in a good year. After the war, Federal revenue needs will be roughly three times corporate profits in a good year. Obviously, it will be much more difficult, after the war, for the government to meet its needs without discouraging enterprise, and therefore without diminishing the number of jobs, than it was before the war. Far more than ever before, it will be necessary for the government in developing a tax program to take account of the effect of taxes upon employment and the standard of living. This means that it will be important for each and every citizen to give attention to these matters—because the policies of the government reflect, in the main, the thinking of the citizens.

Some taxes seriously discourage individuals and business firms from undertaking new and enlarged operations. Other taxes have little or no adverse effect on investments. Some taxes are a burden on consumption, affecting the sales of specific commodities, depending on the nature of the taxes. It is obvious that different kinds of taxes have different economic influences. We must understand the forces that determine the level of employment and consider the tax program in relation to other measures designed to create more jobs.

What are the tests of a good tax system?

1. Taxes should be designed to encourage production and enterprise and to make it attractive for a large number of people to earn all or part of their living by giving jobs to others.
2. Taxation must be fair in principle and administration, with no discrimination between persons in similar circumstances.
3. Taxes should be apparent and not concealed, and should be levied, in the main, directly upon individuals so that each of us will know how much our government is costing him. A moderate income tax at the lower income levels will bring a greater awareness of responsibility than will heavy taxes on consumption which the taxpayer does not see because they are hidden in the price he pays.
4. In the aggregate, taxes should be somewhat progressive.

5. The tax system should be coordinated with the broader objectives of monetary and fiscal policy.
6. Federal, state, and local tax policies should be interpreted as to principles and objectives.

Judged by these standards, our present tax system is extremely unsatisfactory, in fact, it is actually damaging. It is a conglomeration of hodge and direct taxes and of conflicting taxing jurisdictions and policies, with no comprehensive economic motive. It is distorted to appease pressure groups and includes unnecessary punitive measures. It is full of needless complexities. It is a paradise for tax lawyers and a source of confusion and despair for the honest, enterprising business man. In fact, it would seem almost as if our tax laws had been written by some fifth columnist for the purpose of making private enterprise unworkable. We in America pretend to believe in the pioneer spirit, but no one would ever suspect it by looking at our tax system.

When the war is over, there must be a thorough reform of our entire tax system. Federal taxes can and should be reduced substantially; and, in the process of reduction, changes can more readily be introduced. At that time, steps can be taken to achieve some degree of coordination and unity of purpose among federal, state, and local taxing agencies. Taxes play too important a role in our total economic life to ignore the adverse consequences of unrelated and inconsistent policies of different taxing jurisdictions.

The following reform measures are needed in Federal taxation:

1. repeal of the excess profits tax at the earliest possible date after inflationary dangers subside. In the case of most enterprises, the excess profits tax destroys all incentive to do a larger volume of business than in 1939; it appropriates virtually all increases in profits above the level of 1939.
2. Coordinate corporation and individual income taxes so as to avoid double taxation and impediments to reinvestment. Potentially, corporation income taxes should be wholly eliminated. Otherwise, the corporation tax rates should be reduced to the lowest effective rate on personal incomes. Full credit should be given to stockholders for all corporate income taxes paid.
3. Encourage competition and particularly the formation of new enterprises by allowing new corporations generous tax exemptions for a period of five years. Extend the same principle to unincorporated concerns.

4. Encourage risk-taking (and hence job-giving) through extending the loss carry-over to six years or more.
5. Provide for averaging incomes over a period of years in order to remove discrimination against those with irregular incomes and those who take risks of loss in business ventures.
6. Rely upon the personal income tax as the main source of revenue, with broad coverage. The reduction in total taxes after the war should favor the elimination of estate taxes before reducing income taxes.
7. Reduce the upper range of personal income tax rates to a maximum of perhaps fifty to sixty per cent so that risk-taking investments will be really attractive. Higher rates are punitive in character, yield small receipts, and foster risk-taking.
8. Encourage risk-taking by individuals in the higher brackets by making the surtax on incomes of \$20,000 a year or more half as much on income in the form of dividends as on income in the form of salaries or interest.
9. Encourage risk-taking by individuals by permitting capital losses to be charged against general income provided the reduction of tax liability in any one year is not more than fifty per cent.

10. Repeal the tax-exempt privilege for all new securities issued by all governmental jurisdictions.
11. Eliminate excise taxes which place a disproportionate burden on persons with lower incomes so as to encourage greater consumption and provide an expanded market for our vast industrial capacity.
12. Reform tax administration to simplify forms and procedures, to broaden the scope of enforcement, and to encourage the spirit of justice.

With such reforms and continuing respect for the tax program as it affects the economic situation, we can look toward taxation as an instrument of constructive influence in giving the fullest encouragement to free enterprise and in obtaining continued prosperity.

John H. McEwen, Jr.

President, McGraw-Hill Publishing Company, Inc.

Airline Officials Report to SEC On Stock Holdings at Year End

Total of 1,500 shares of Braniff Airways \$2.50 common sold and 1,084 given away by three executives during December.

By ROGER WHICO

Three officials of Braniff Airways, Inc., sold a total of 1,500 shares of the company's \$2.50 par value common stock and gave away 1,084 shares during December, 1964.

The sales, which have a current market value of around \$28,300, were made by Charles E. Reed, vice-president, and Bill C. Thurman, casual and director. Reed sold 750 shares and Thurman disposed of \$30. In addition to his sales, Reed gave away 180 shares of common, leaving his holdings at the end of December at 1,185 shares. Thurman's holdings in Braniff at the close of 1964 consisted of 3,400 common. T. E. Rensell, president and holder of more than 10 percent of Braniff common, gave away 844 shares in December, leaving him 341,204 shares at the close of the year. At current market prices, Mr. Rensell's holdings at the year end had a market value of more than \$9,900,000.

Released by SEC—The transactions in Braniff common are disclosed in summary of security transactions and holdings made public by the Securities and Exchange Commission.

The Commission's reports also showed that Robert Lehman, a director of Pan American Airways Corp., purchased 960 shares of the company's \$5 par value capital stock in December, but gave away a like number of shares during the same month, leaving his holdings at the end of the year unchanged at 3,660 shares. Harold M. Dwyer, vice-president of Pan American, reported sales of 200 shares during the month, leaving him an ownership of 1,360 shares at the close of 1964.

Western Air Lines—William A. Cantler, president and owner of more than 10 percent of the \$1 per

common stock of Western Air Lines, Inc., reported to the SEC that he received, through a distribution, 3,600 shares of the company's common stock during December, which brought his holdings at the close of the year to 159,360 shares. At current prices, these shares have a market value in excess of \$1,500,000.

Francis Harlow, Jr., a director of Colonial Airlines, Inc., reported the purchase of 200 shares of the company's common in December, bringing his holdings to 8,730 shares.

Expansive in Stock—Several officials at the Glenn L. Martin Co. reported receipt of the company's \$1 par value common in compensation in December.

Joseph T. Hartman, executive vice-president, received 300 shares of common, bringing his holdings to 3,200 shares. William K. Rice, vice-president, received 300 shares, giving him a total of 960 shares. While Edward P. Volkmann, Jr., vice-president, received 400 shares, bringing his holdings to 3,613 shares. Harry T. Rowland, vice-president, and Myron G. Shook, assistant secretary, received 388 shares each, bringing their holdings to 358 and 300, respectively.

Glenn L. Martin's Holdings—Glenn L. Martin, president and owner of more than 10 percent of the company's common stock, gave away 3,283 shares in December, leaving his total holdings at the close of the year at 312,715 shares which, at current prices, have a market value of around \$5,271,000.

Carroll L. Clark, director of United Aircraft Corp., reported sales of 460 shares of the company's \$5 par value common on Dec. 18, and a purchase of a similar number of shares on the same day, leaving his holdings at the end of the year

unchanged at 500 shares. Joseph F. McCarthy, director, reported the gift of 300 shares of common to his children, leaving him 1,280 shares.

Republic Aviation—Paul H. Mason, director and owner of more than 10 percent of Republic Aviation Corp. common, reported disposition of 50,000 shares of the company's convertible and preferred stock in December, which is a redemption. At the close of the year, he held 131,307 shares of the company's \$1 per common. At current prices, these shares have a market value in excess of \$7,800,000.

Other transactions reported to the SEC include: Sale of 600 shares of Solar Aircraft Co. \$1 per common by Edward T. Price, president and general manager, leaving him holdings at 16,010 shares and 150 preferred A stock, acquisition of 40 shares of Bell Aircraft Corp. \$1 per common through stock dividend by Charles A. Cripe, a director, bringing his holdings to 140 shares; purchase of 200 shares of Cessna Aircraft Co. \$1 per common by Frank Reister, secretary and controller, giving him 480 shares.

Boeing Aircraft—Walter B. Beach, president and chairman of Boeing Aircraft Corp. gave away 1,600 shares of the company's \$1 per common, reducing his holdings to 91,838 shares at the close of the year. A basic security transaction, reported by Beach as a gift 320 shares, bringing his holdings to 10,441 shares.

Harold L. Crow, president of KAI Associates, Inc., sold 1,000 shares of the company's \$1 per common, leaving his holdings at the close of the year at 2,325 shares.

Frank R. Phillips, director of Raytheon Associates Co., reported that Chordon Co. owned 10,750 shares of Raytheon's \$1 per common on December 18, 1963. C. Arnold Smith, also a director, reported that he held 1,900 shares of Raytheon's common on the same date.

Financial Reports

Continental Motors Corp. reports in preliminary statement for fiscal year ended Dec. 31 a net profit of \$6,671,282, equal to \$2.01 a common share compared with \$5,472,164 or \$1.52 a share the preceding year.

Interspace Aircraft & Engineering Corp. reports for year to April 28, last, net income of \$135,300, equal to \$1.46 each on 130,000 shares, compared with \$173,851 or \$2.85 a share on 60,000 shares for the year ending April 30, 1962.

Northeast Tells SEC Of Financing Plans

Most of funds raised to go into equipment used for retiring bank loans.

Northeast Airlines, Inc., in a supplemental amendment to its registration statement covering the issuance and sale of 200,000 shares of its \$1 par value common stock, has furnished the Securities and Exchange Commission with an amended statement setting forth how the company will allocate the estimated net proceeds of approximately \$973,543.20.

Loans to Be Reduced—The sum of \$47,245 will be applied to reduction of outstanding bank loans, proceeds of which were used to purchase two Lockheed 10A aircraft, and partly to reimburse the company for amounts previously expended for purchase of two Lockheed 10A aircraft, the company stated.

The sum of \$326,228 is to be added to the general corporate funds of the company, for the following purposes:

Approximately \$488,288 will be used to purchase three 26-passenger Douglas DC4 aircraft, together with necessary instruments, radio equipment, shop equipment, spare parts and accessories, including two Pratt and Whitney B1833-S1C63 engines.

If the balance of the net proceeds, and any portion not so allocated for purposes stated above, will be used to reimburse the treasury of the company for additions and improvements to its equipment and facilities, net income for 1963, less current receipts and its addition to the general funds as additional working capital.

NAM Leaders Hold Post-War Talks

Aircraft industry represented by six executives of principal companies.

Leaders of economic, management, labor and war veteran groups attended a meeting in Atlantic City over the week-end to study a "postwar post-war program."

The session, under auspices of the National Association of Manufacturers, were attended by the following aircraft executives, repre-

senting the industry through the Aeronautical Chamber of Commerce:

Ernest H. Taylor, Douglas Aircraft, chairman of the Chamber's Economic Development Committee; J. Stacy Smith, Jacobs Aircraft Engineers; J. A. B. Smith and Charles W. Loon, both of Curtiss-Wright; H. W. Cahn, Northrop Aircraft; and Robert B. Lee, Sperry Gyroscope.

The meetings were closed to the press and an NAM spokesman said there were no speeches, merely general discussions of the post-war picture.

Retooling Layoffs Affect Two Firms

Curtiss-Wright and Douglas re-equip plants to step up cargo plane output.

An accelerated cargo plane program at Curtiss-Wright and Douglas plants is highlighted in a report by the Office of War Information, showing case histories in connection with cancellation or curtailment of war contracts.

CWI reports that several aircraft plants are now laying off workers while undergoing production adjustments. In St. Louis a Curtiss-Wright plant laid off 1,380 as it is retooled to increase production of cargo planes. Company of-

icials, say that at the termination of the re-tooling process, employment at the plant will reach a new high and all workers will be recalled.

\$750 Laid Off—At the Douglas plant in Tulsa, largest employer in the area, the report said, 7,500 workers were laid off during December, and company officials expect about 4,000 more to be laid off by July as the plant re-tools for increased production of cargo planes. The Douglas Company expects to employ all but 3,488 of these workers.

In Akron, Goodyear Aircraft Corp., finding its blimp construction program easing up, laid off 480 workers, employees who have been the last laid, almost all of these, however, were transferred to another Akron plant of the company where they were hired to work on Corsair Navy fighter planes.

Piper Plant Affected—Another aircraft plant affected was Piper Aircraft Corp., Leitch Haven, Pa., where completion of a special U. S. Army-Signals Corps contract required a layoff of 200 employees, about 90 percent of whom were women.

The report said the company discussed the pending layoffs with officials of the United States Employment Service and agreed to refer all employees affected to the local USRS office. To reduce the number of employees released, the plant shifted from a 48- to a 40-hour week.

Of the 285 released, the employment service referred 184 to other war jobs in the country and reported 95 were "job shoppers."



Breeze Dividend

Directors of Breeze Corporation, Inc., have voted a dividend of 48 cents a common share, payable Mar. 18 to stockholders of record Mar. 1. In 1963, the company paid total dividends of \$1.60 a share.

Fleet Builds Parts

Reports that Fleet Aircraft, Ltd., Fort Erie, Ont., has started to make combat aircraft, have been corrected by Walter N. Doudart, vice-president and general manager, who said the firm will build component parts for combat aircraft, but not complete combat aircraft and will continue with a reduced output of Fairchild Corsair trainers.

Flying Utility and Economy

EVERY local, state and U. S. government official with any aviation predilection should read some of the addresses presented at the Kansas State Aviation Conference last week for a glimpse into the future that civil aviation may enjoy, with proper cooperation. For example:

Culver Aircraft Corp. built one of the best light-planes in America before the war. Like all other companies in its class, it crumbled in the war effort and has not produced a pleasure craft in months.

Yet its vice-president and general manager, T. B. Woodbury, told the Conference that he receives an average of 300 inquiries a day from men and women interested in purchasing or distributing Culvers as soon as sales are possible.

About 80 percent of these are from pilots, or present or past owners of planes. Culver has returned thousands of dollars in deposits on new aircraft, forwarded voluntarily. It has turned down hundreds of prospective distributors who have offered the company as much as \$50,000 for certain territories. There appears as much confidence in letters from business men as from sportmen.

Meanwhile, Culver's plans for production and sales go ahead as rapidly as possible under stress of priority war work. The perennial goal is to produce a faster, cheaper, cleaner, more convenient vehicle for the business man and family than any yet devised. That is the goal of all other progressive companies in its field—an ideal cross-country plane.

"We visualize an airplane costing approximately \$2,500. We visualize 140 to 150 miles cruising speed. We visualize pilot error out of the cockpit, a plane easy to fly that lands slowly, that has good takeoff and climb, a bicycle gear job that will never wear more than 400 to 500 feet for landings and takeoffs, and a plane to which crosswind is

no hazard," Mr. Woodbury points out.

"I wish you could sit at my desk and see the flow of letters and inquiries that come to us at a time when we are building no commercial product."

Culver's experience is being duplicated by most of the leading lightplane manufacturers. It is not unique. All of the members of the Aeronautical Chamber of Commerce Personal Aircraft Committee have similar plans for products—some with lower cost than Culver—which will get unprecedented safety and utility standards. Major companies such as Consolidated Vultee, with the remarkable idea genius, Bill Stout, will enter the picture. Competition will be sharp. Everyone even with good designs, and the public will gain from competition in better aircraft, lower prices, better service.

Yet all of the lightplane design and production thinking in the world will amount to nothing if local communities, states, and the federal government do not unite in a scrupulous national plan for airports, air fields, and landing strips to bring the airplane into every area.

It would be a grave mistake to over-build, over-spend, and repeat the mistakes of the great roads on the taxpayers of the 20's which left deserted airports everywhere. Hundreds of well-planned, unpaved fields or strips could be built economically, with growing space available, and would be sufficient for many years. The common, garden variety of flying business men and sportmen will want utility and economy, not grandeur and "cover charges."

Government officials who try to sell an unnecessarily elaborate and costly airport plan to such potential flyers will be doing a lasting disservice to aviation.

AAF Steps Up Its Punch

PUBLISHED REPORTS from England, passed by U. S. censorship, indicate that the AAF in Britain is near numerical equality with the RAF.

In the past 70 days the AAF has flown more sorties and dropped more bombs tonnage than has the RAF based in the British Isles, Horsa Biplanes disclosed last week, so that we now are able to carry on raids by 600 to 800 heavy bombers, plus an almost equal number of fighters, plus medium bombers, and strength is still increasing.

Mr. Baldwin—and not a War Department spokesman or spokesman—further reports that "our percentage of losses at daylight bombardment is now less than the RAF's percentage of losses in night bombardment."

If these facts are correct, they make big news because they conflict with frequent reports illus-

trating back recently from England that our daylight raids have been costly than the British attacks and that we are losing too many planes in enemy territory because of fuel lack resulting from long periods of flying at full throttle during fighter attacks. Returning visitors from England have also indicated that our planes during furious fighting ran out of ammunition long before returning to Britain, and that our bombers are ordered to keep in close formations even through dense fog areas seen directly ahead. The same sources point out that in the RAF which has been bombing Berlin, and making the longest raids—at night.

Mr. Baldwin has published information the War Department might have used officially weeks ago to silence once again the criticism of our daylight bombing theory.

ROBERT H. WOOD

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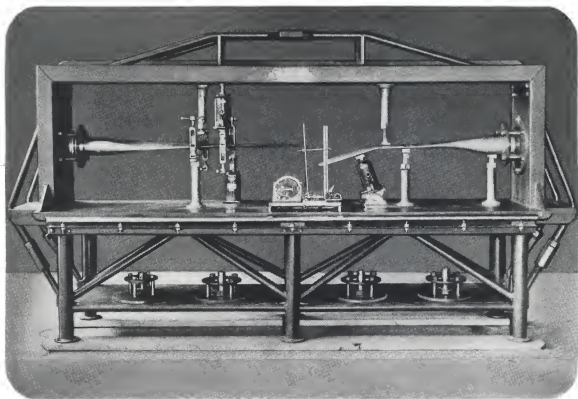
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